UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA
PITTSBURG DIVISION

KONINKLIJKE PHILIPS N.V. and PHILIPS NORTH AMERICA LLC (previously, PHILIPS ELECTRONICS NORTH AMERICA CORPORATION)	§	**Case No. 2:12-cv-1369**
	§	**Judge Nora Barry Fischer**
Plaintiffs,	§	
v.	§	**Gale R. Peterson, Special Master**
ZOLL LIFECOR CORPORATION	§	
Defendant.	§	

SPECIAL MASTER'S REPORT AND RECOMMENDATION ON PARTIES' DAUBERT MOTIONS [449, 452, 453, 454, 459, 462]

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I.
Introduction

Koninklijke Philips N.V. and Philips North America LLC (previously, Philips Electronics North America Corp.), ("Philips") has asserted that ZOLL Lifecor Corporation ("ZLC"), infringes a number of patents generally drawn to external defibrillator technology.

The parties have filed six "*Daubert* motions" under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), as well as under Rules 403 and 702, FEDERAL RULES OF EVIDENCE, to exclude the testimony of certain individuals.

The Court's Order of December 1, 2016 [Dkt. 513] ordered, *inter alia*, that the master to prepare a report and recommendation on those *Daubert* motions.

II.
Summary of Motions and Responses

The parties have filed the following motions and responses:

Philips' Motion to Exclude Testimony of Mark J. Chandler		
Date	**Dkt. No.**	**Description**
11/3/2016	462	Daubert Motion to Exclude Improper Testimony of Mark J. Chandler ("Philips' Chandler Motion")
11/3/2016	463	Memorandum in Support of Daubert Motion to Exclude Improper Expert Testimony of Mark J. Chandler ("Philips' Chandler Memo")
12/1/2016	545	ZOLL LifeCor Corporation's Opposition to Philips' Daubert Motion to Exclude Expert Testimony of Mark J. Chandler ("ZLC's Chandler Opp.")
12/15/2016	582	Reply in Support of Philips' Daubert Motion to Exclude Improper Expert Testimony of Mark J. Chandler ("Philips' Chandler Reply")
12/22/2016	633	ZOLL LifeCor Corporation's Sur-Reply in Opposition to Motion to Exclude Expert Testimony of Mark J. Chandler ("ZLC Chandler Sur-Reply")

Philips' Motion to Exclude Testimony of Dr. Sandor Kovacs		
Date	**Dkt. No.**	**Description**
11/3/2016	449	Daubert Motion to Exclude Improper Testimony of Mark J. Chandler ("Philips' Kovacs Motion")

Philips' Motion to Exclude Testimony of Dr. Sandor Kovacs		
Date	**Dkt. No.**	**Description**
11/3/2016	450	Memorandum in Support of Daubert Motion to Exclude Expert Testimony of Dr. Sandor Kovacs ("Philips' Kovacs Memo")
12/1/2016	543	ZOLL LifeCor Corporation's Opposition to Motion to Exclude Expert Testimony of Dr. Sandor Kovacs ("ZLC's Kovacs Opp.")
12/15/2016	583	Reply Brief in Support of Philips's Daubert Motion to Exclude Expert Testimony of Dr. Sandor Kovacs ("Philips' Kovacs Reply")
12/22/2016	639	ZOLL LifeCor Corporation's Sur-Reply in Opposition to Philips's Motion to Exclude Expert Testimony of Dr. Sandor Kovacs, Ph.D, M.D. ("ZLC Kovacs Sur-Reply")

Philips' Motion to Exclude Testimony of Dr. Wayne McDaniel		
Date	**Dkt. No.**	**Description**
11/3/2016	459	Daubert Motion to Exclude Improper Testimony of Dr. Wayne McDaniel ("Philips' McDaniel Motion")
11/3/2016	460	Memorandum in Support of Daubert Motion to Exclude Improper Testimony of Dr. Wayne McDaniel ("Philips' McDaniel Memo")
12/1/2016	544	ZOLL LifeCor Corporation's Opposition to Motion to Exclude Expert Testimony of Dr. Wayne McDaniel ("ZLC's McDaniel Opp.")
12/15/2016	581	Philips's Reply in Support of Philips's Daubert Motion to Exclude Improper Testimony of Dr. Wayne McDaniel ("Philips' McDaniel Reply")
12/22/2016	634	ZOLL LifeCor Corporation's Sur-Reply in Opposition to Motion to Exclude Expert Testimony of Dr. Wayne McDaniel ("ZLC McDaniel Sur-Reply")

ZLC's Motion to Exclude Testimony of Dr. John P. Freese		
Date	**Dkt. No.**	**Description**
11/3/2016	452	ZOLL LifeCor Corporation's Motion to Exclude the Testimony of Dr. John P. Freese ("ZLC's Freese Motion")
11/3/2016	455	ZOLL LifeCor Corporation's Memorandum in Support of Its Motion to Exclude the Testimony of Dr. John P. Freese ("ZLC's Freese Memo")
12/1/2016	532	Philips's Opposition to Zoll's Motion to Exclude the Testimony of Dr. John P. Freese ("Philips' Freese Opp.")

ZLC's Motion to Exclude Testimony of Dr. John P. Freese		
Date	**Dkt. No.**	**Description**
12/15/2016	578	ZOLL LifeCor Corporation's Reply in Support of Its Motion to Exclude the Testimony of Dr. John P. Freese ("ZLC's Freese Reply")
12/22/2016	627	Philips's Sur-Reply to Zoll's Motion to Exclude the Testimony of Dr. John P. Freese ("Philips' Freese Sur-Reply")

ZLC's Motion to Exclude Testimony of Mr. John Jarosz		
Date	**Dkt. No.**	**Description**
11/3/2016	453	ZOLL LifeCor Corporation's Motion to Exclude the Testimony of Philips's Damages Expert, Mr. John Jarosz ("ZLC's Jarosz Motion")
11/3/2016	456	ZOLL LifeCor Corporation's Memorandum in Support of Its Motion to Exclude the Testimony of Philips's Damages Expert, Mr. John Jarosz ("ZLC's Jarosz Memo")
12/1/2016	532	Philips's Opposition to Zoll's Motion to Exclude the Testimony of Philips's Damages Expert, Mr. John Jarosz ("Philips' Jarosz Opp.")
12/15/2016	580	ZOLL LifeCor Corporation's Reply in Support of Its Motion to Exclude the Testimony of Philips's Damages Expert, Mr. John P. Jarosz ("ZLC's Jarosz Reply")
12/22/2016	628	Philips's Sur-Reply to Zoll's Motion to Exclude the Testimony of Philips's Damages Expert, Mr. John Jarosz ("Philips' Jarosz Sur-Reply")

ZLC's Motion to Exclude Testimony of Prof. Patrick Wolf		
Date	**Dkt. No.**	**Description**
11/3/2016	454	ZOLL LifeCor Corporation's Motion to Exclude the Testimony of Professor Patrick Wolf ("ZLC's Wolf Motion")
11/3/2016	457	ZOLL LifeCor Corporation's Memorandum in Support of Its Motion to Exclude the Testimony of Professor Patrick Wolf ("ZLC's Wolf Memo")
12/1/2016	538	Philips's Opposition to Zoll Lifecor's Motion to Exclude the Testimony of Dr. Patrick Wolf ("Philips' Wolf Opp.")
12/15/2016	579	ZOLL LifeCor Corporation's Reply in Support of Its Motion to Exclude the Testimony of Professor Patrick Wolf ("ZLC's Wolf Reply")
12/22/2016	629	Philips's Sur-Reply to Zoll Lifecor's Motion to Exclude the Testimony of Dr. Patrick Wolf ("Philips' Wolf Sur-Reply")

Each of those motions will be addressed below in that same order.

III.
Standards Under *Daubert*, *Kumho*, and Rules 702, 703 and 403

In *Daubert*, the Supreme Court charged trial courts with the obligation to act as gatekeepers and exclude unreliable expert scientific testimony ("[f]aced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset, pursuant to Rule 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue." 509 U.S. at 592, and "the Rules of Evidence— especially Rule 702—do assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." 509 U.S. at 597). In *Kumho*, the Court noted that the "question before us is whether this basic gatekeeping obligation applies only to 'scientific' testimony or to all expert testimony." 526 U.S. at 147. The Court answered that "[w]e, like the parties, believe that it applies to all expert testimony." *Id.*

Rule 702, FEDERAL RULES OF EVIDENCE, was subsequently revised to provide:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

(as amended in 2000, and subsequently in 2011).

The Committee Notes on Rules – 2000 Amendment explain that "[t]he amendment affirms the trial court's role as gatekeeper and provides some general standards that the trial court must use to assess the reliability and helpfulness of proffered expert testimony. * * * Consequently, the admissibility of all expert testimony is governed by the principles of Rule 104(a). Under that Rule, the proponent has the burden of establishing that the pertinent admissibility requirements are met by a preponderance of the evidence." FED. R. EVID. 702 (Committee Notes on Rules – 2000 Amendment).

The Committee Notes further explain that "*Daubert* set forth a non-exclusive checklist for trial courts to use in assessing the reliability of scientific expert testimony." *Id.* Those Notes also explain that "[t]he specific factors explicated by the *Daubert* Court are (1) whether the expert's technique or theory can be or has been tested—that is, whether the expert's theory can be challenged in some objective sense, or whether it is instead simply a subjective, conclusory approach that cannot reasonably be assessed for reliability; (2) whether the technique or theory has been subject to peer review and publication; (3) the known or potential rate of error of the technique or theory when applied; (4) the existence and maintenance of standards and controls; and (5) whether the technique or theory has been generally accepted in the scientific community." *Id. See also*, *Daubert*, 509 U.S. at 593-95 ("We are confident that federal judges possess the capacity to undertake this review. Many factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test. But some general observations are appropriate.").

The Notes point out that "[t]he Court in *Kumho* held that these factors might also be applicable in assessing the reliability of nonscientific expert testimony, depending upon 'the particular circumstances of the particular case at issue.' " Fed. R. Evid. 702 (Committee Notes on Rules – 2000 Amendment), quoting *Kumho*, 526 U.S. at 150 ("The conclusion, in our view, is that we can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends upon the particular circumstances of the particular case at issue.").

The Court in *Kumho* further explained that "those factors [mentioned in *Daubert*] do not all necessarily apply even in every instance in which the reliability of scientific testimony is challenged. It might not be surprising in a particular case, for example, that a claim made by a scientific witness has never been the subject of peer review, for the particular application at issue may never previously have interested any scientist. Nor, on the other hand, does the presence of *Daubert's* general acceptance factor help show that an expert's testimony is reliable where the discipline itself lacks reliability, as, for example, do theories grounded in any so-called generally accepted principles of astrology or necromancy." 526 U.S. at 151.

The Committee Notes explain that "[n]o attempt has been made to 'codify' these specific factors. *Daubert* itself emphasized that the factors were neither exclusive nor dispositive. Other cases have recognized that not all of the specific Daubert factors can apply to every type of expert testimony.

* * * The standards set forth in the amendment are broad enough to require consideration of any or all of the specific *Daubert* factors where appropriate." Fed. R. Evid. 702 (Committee Notes on Rules – 2000 Amendment).

For example, the Committee Notes point out that:

> Courts both before and after *Daubert* have found other factors relevant in determining whether expert testimony is sufficiently reliable to be considered by the trier of fact. These factors include:
>
> (1) Whether experts are "proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995).
>
> (2) Whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion. *See General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997) (noting that in some cases a trial court "may conclude that there is simply too great an analytical gap between the data and the opinion proffered").
>
> (3) Whether the expert has adequately accounted for obvious alternative explanations. *See Claar v. Burlington N.R.R.*, 29 F.3d 499 (9th Cir. 1994) (testimony excluded where the expert failed to consider other obvious causes for the plaintiff's condition). Compare *Ambrosini v. Labarraque*, 101 F.3d 129 (D.C.Cir. 1996) (the possibility of some uneliminated causes presents a question of weight, so long as the most obvious causes have been considered and reasonably ruled out by the expert).
>
> (4) Whether the expert "is being as careful as he would be in his regular professional work outside his paid litigation consulting." *Sheehan v. Daily Racing Form, Inc.*, 104 F.3d 940, 942 (7th Cir. 1997). *See Kumho Tire Co. v. Carmichael*, 119 S.Ct. 1167, 1176 (1999) (*Daubert* requires the trial court to assure itself that the expert "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field").
>
> (5) Whether the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give. *See Kumho Tire Co. v. Carmichael*, 119 S.Ct. 1167, 1175 (1999) (*Daubert's* general acceptance factor does not "help show that an expert's testimony is reliable where the discipline itself lacks reliability, as, for example, do theories grounded in any so-called generally accepted principles of astrology or necromancy."); *Moore v. Ashland Chemical, Inc.*, 151 F.3d 269 (5th Cir. 1998) (*en banc*) (clinical doctor was properly precluded from testifying to the toxicological cause of the plaintiff's respiratory problem, where the opinion was not sufficiently grounded in scientific methodology); *Sterling v. Velsicol Chem. Corp.*, 855 F.2d 1188 (6th Cir. 1988) (rejecting testimony based on "clinical ecology" as unfounded and unreliable).

Id. And the Committee Notes add that "[a]ll of these factors remain relevant to the determination of the reliability of expert testimony under the Rule as amended. Other factors may also be relevant." *Id.*

The Committee Notes further explain, albeit in the context of the 2000 amendments, that "[a] review of the caselaw after *Daubert* shows that the rejection of expert testimony is the exception rather than the rule. *Daubert* did not work a 'seachange over federal evidence law,' and 'the trial court's role as gatekeeper is not intended to serve as a replacement for the adversary system.' *United States v. 14.38 Acres of Land Situated in Leflore County, Mississippi*, 80 F.3d 1074, 1078 (5th Cir. 1996). As the Court in *Daubert* stated: 'Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.' 509 U.S. at 595 [*sic.* 596]." *Id.*

More fully, the Supreme Court in *Daubert* explained that:

> Respondent expresses apprehension that abandonment of "general acceptance" as the exclusive requirement for admission will result in a "free-for-all" in which befuddled juries are confounded by absurd and irrational pseudoscientific assertions. In this regard respondent seems to us to be overly pessimistic about the capabilities of the jury and of the adversary system generally. Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. * * * Additionally, in the event the trial court concludes that the scintilla of evidence presented supporting a position is insufficient to allow a reasonable juror to conclude that the position more likely than not is true, the court remains free to direct a judgment, Fed. Rule Civ. Proc. 50(a), and likewise to grant summary judgment, Fed. Rule Civ. Proc. 56. * * * These conventional devices, rather than wholesale exclusion under an uncompromising "general acceptance" test, are the appropriate safeguards where the basis of scientific testimony meets the standards of Rule 702.

509 U.S. at 595-96. Namely, although the Supreme Court in *Daubert* plainly imposed a gatekeeping function on trial courts, the Supreme Court likewise expressly noted that was not intended to diminish the applicability, and importance, of the other facets of our adversarial system of resolving disputes, namely vigorous cross-examination, concise jury instructions, JMOL motions under Rule 50, FEDERAL RULES OF CIVIL PROCEDURE, and motions for summary judgment under Rule 56, FEDERAL RULES OF CIVIL PROCEDURE. Additionally, of course, there is the potential for a motion for a new trial under Rule 59, FEDERAL RULES OF CIVIL PROCEDURE.

The Committee Notes furthermore expressly point out that "this amendment is not intended to provide an excuse for an automatic challenge to the testimony of every expert." Fed. R. Evid. 702 (Committee Notes on Rules – 2000 Amendment).

The Committee Notes further explain that "[w]hen a trial court, applying this amendment, rules that an expert's testimony is reliable, this does not necessarily mean that contradictory expert testimony is unreliable. The amendment is broad enough to permit testimony that is the product of competing principles or methods in the same field of expertise." *Id.* Namely, witnesses may offer competing opinions without either (or both) opinions being dubbed "unreliable."

In general, the Federal Circuit applies the law of the otherwise applicable regional circuit to issues not unique to patent law, including the admissibility of expert testimony. *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1294 (Fed. Cir. 2015)("Whether proffered evidence is admissible at trial is a procedural issue not unique to patent law, and we therefore review the district court's decision to admit expert testimony under the law of the regional circuit, here the Fifth Circuit.").

The Third Circuit, in *Schneider ex rel. Estate of Schneider v. Fried*, 320 F.3d 396 (3d Cir. 2003), reiterated that it, like many of its sister circuits, reviews the decision whether to admit or reject expert testimony under an abuse of discretion standard. 320 F.3d at 404. "An abuse of discretion arises only when the decision 'rests upon a clearly erroneous finding of fact, an errant conclusion of law or an improper application of law to fact.' " *Id.* quoting *Oddi v. Ford Motor Co.*, 234 F.3d 136, 146 (3d Cir.2000).

The Third Circuit has explained:

> We have explained that Rule 702 embodies a trilogy of restrictions on expert testimony: qualification, reliability and fit. * * * Qualification refers to the requirement that the witness possess specialized expertise. We have interpreted this requirement liberally, holding that "a broad range of knowledge, skills, and training qualify an expert." * * * Secondly, the testimony must be reliable; it "must be based on the 'methods and procedures of science' rather than on 'subjective belief or unsupported speculation'; the expert must have 'good grounds' for his on her belief. In sum, *Daubert* holds that an inquiry into the reliability of scientific evidence under Rule 702 requires a determination as to its scientific validity." * * * Finally, Rule 702 requires that the expert testimony must fit the issues in the case. In other words, the expert's testimony must be relevant for the purposes of the case and must assist the trier of fact. The Supreme Court explained in *Daubert* that "Rule 702's `helpfulness' standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility." * * *.

320 F.3d at 404.

Additionally, Rule 703, FEDERAL RULES OF EVIDENCE, provides:

> An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

The Federal Circuit has explained that "[u]nder these rules, a district court may exclude evidence that is based upon unreliable principles or methods, legally insufficient facts and data, or where the reasoning or methodology is not sufficiently tied to the facts of the case. * * * But the question of whether the expert is credible or the opinion is correct is generally a question for the fact finder, not the court. * * * Indeed, '[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.' " *Summit 6,* 802 F.3d at 1295-96.

For example, the Federal Circuit has explained, in connection with determining a reasonable royalty, that "[t]his court has recognized that estimating a reasonable royalty is not an exact science. The record may support a range of reasonable royalties, rather than a single value. Likewise, there may be more than one reliable method for estimating a reasonable royalty," *id.* at 1296, and "[a] party may use the royalty rate from sufficiently comparable licenses, value the infringed features based upon comparable features in the marketplace, or value the infringed features by comparing the accused product to non-infringing alternatives. * * * A party may also use what this court has referred to as 'the analytical method,' focusing on the infringer's projections of profit for the infringing product." *Id.*

Overall, the Federal Circuit has advised that *vis-à-vis* determining a reasonable royalty:

> All approaches have certain strengths and weaknesses, and, depending upon the facts, one or all may produce admissible testimony in a particular case. Because each case presents unique circumstances and facts, it is common for parties to choose different, reliable approaches in a single case and, when they do, the relative strengths and weaknesses of each approach may be exposed at trial or attacked during cross-examination. That one approach may better account for one aspect of a royalty estimation does not make other approaches inadmissible.

> In sum, while all approximations involve some degree of uncertainty, the admissibility inquiry centers on whether the methodology employed is reliable. * * *. A distinct but integral part of that inquiry is whether the data utilized in the methodology is sufficiently tied to the facts of the case. * * * Hence, a reasonable or scientifically valid methodology is nonetheless unreliable where the data used is not sufficiently tied to the facts of the case. * * * Likewise, ideal input data cannot save a methodology that is plagued by logical deficiencies or is otherwise unreasonable. * * * But where the methodology is reasonable and its data or evidence are sufficiently tied to the facts of the case, the gatekeeping role of the court is satisfied, and the inquiry on the correctness of the methodology and of the results produced thereunder belongs to the fact-finder.

802 F.3d at 1296.

Lastly, Rule 403, FEDERAL RULES OF EVIDENCE, provides:

> The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.

The Advisory Committee Notes explain that "[t]he case law recognizes that certain circumstances call for the exclusion of evidence which is of unquestioned relevance. These circumstances entail risks which range all the way from inducing decision on a purely emotional basis, at one extreme, to nothing more harmful than merely wasting time, at the other extreme. Situations in this area call for balancing the probative value of and need for the evidence against the harm likely to result from its admission." Fed. R. Evid. 403 (Notes of Advisory Committee on Proposed Rules).

The Supreme Court in *Daubert* explained that "[t]hroughout, a judge assessing a proffer of expert scientific testimony under Rule 702 should also be mindful of other applicable rules. Rule 703 provides that expert opinions based on otherwise inadmissible hearsay are to be admitted only if the facts or data are 'of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject.' Rule 706 allows the court at its discretion to procure the assistance of an expert of its own choosing. Finally, Rule 403 permits the exclusion of relevant evidence 'if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury * * *.' Judge Weinstein has explained: 'Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it. Because of this risk, the judge in weighing possible prejudice against probative force under Rule 403 of the present rules exercises more control over experts than over lay witnesses.' Weinstein, 138 F. R. D., at 632." 509 U.S. at 595.

IV.
Philips' Motion to Exclude Testimony of Mark J. Chandler [Dkt. 462]

A. Brief Description of Motion and Parties' Arguments

Because large portions of the parties' respective submissions have been filed under seal, the substance of the motion and the parties' arguments will be addressed only in general terms.

Philips contends that Mr. Chandler's opinions, which ZLC offers *vis-à-vis* damages issues, are cumulative to the opinions offered by Dr. Vellturo, and would not aid the trier of fact. According to Philips, Mr. Chandler does not offer an opinion on the amount of damages to be awarded in this case, but rather presents opinions identifying alleged flaws in Philips' damages expert's opinions.

Philips contends that Mr. Chandler's proposed testimony will lead to jury confusion and will not aid the jury because he did not perform a complete reasonable royalty damages analysis. Philips contends that his testimony should be excluded under FED. R. EVID. 403 because its probative value is outweighed by the danger of "needlessly presenting cumulative evidence, causing undue delay, wasting time, or confusing the jury." Philips' Chandler Memo [Dkt. 463] at 4-5. Philips also contends that Mr. Chandler's proposed testimony is cumulative to Dr. Vellturo's proposed testimony, and "[w]hen a party offers two experts on a single issue, it is proper to exclude a second expert whose opinions add nothing beyond the opinions offered in the first expert's report." *Id.* at 5.

Philips also urges that "[p]ermitting Mr. Chandler to testify on licensing and the *Georgia Pacific* Factors, largely echoing Dr. Vellturo's damages analysis and adding nothing new, runs the risk that the jury will simply 'count heads' and be unduly influenced by the number of experts testifying, rather than the substance of the testimony." *Id.* at 9.

ZLC responds that Mr. Chandler is being presented as a patent licensing expert. ZLC contends that "Philips does not and cannot challenge Mr. Chandler's expertise. In the course of his 25-year career, Mr. Chandler has managed or led over 100 technology licensing programs and has been recognized by his peers as one of the world's leading patent management strategy professionals. Philips also does not and cannot dispute that Mr. Chandler has applied a reliable methodology." ZLC's Chandler Opp. [Dkt. 545] at 1.

In response to Philips' argument that Mr. Chandler's testimony will not aid the jury because he did not offer an opinion on the amount of damages that should be awarded, ZLC notes that "the

Federal Rules permit experts to testify on ultimate issues but do not require them to do so. Among other things, Mr. Chandler's testimony will assist the jury in assessing Mr. Jarosz's opinions. Mr. Jarosz purports to propose a 'reasonable royalty' to which ZOLL Lifecor and Philips would have agreed at a 'hypothetical negotiation' for a license to the patents-in-suit. Based on his years of experience, Mr. Chandler will testify that Mr Jarosz's $ xxxxx per-unit royalty is excessive from the standpoint of patent licensing practices and would never have been agreed to by a reasonably prudent patent licensee in ZOLL Lifecor's position." *Id.*

Responding to Philips' argument that Mr. Chandler's testimony would be cumulative, ZLC urges that "Philips mischaracterizes Mr. Chandler's role in this case. Mr. Chandler will offer opinions on patent licensing issues, not opinions on the amount of damages that should be awarded if the jury finds for Philips on liability. That is Dr. Vellturo's role. Dr. Vellturo is an economist who relies on Mr. Chandler's opinions on patent licensing in forming his own opinions on reasonable royalty damages." *Id.* at 2.

Lastly, ZLC urges that "Rule 403 is a trial-oriented rule." *Id.* at 14, quoting *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829, 859 (3rd Cir. 1990)(*Paoli I*). The Third Circuit wrote: "Moreover, we stress that pretrial Rule 403 exclusions should rarely be granted. * * * Excluding evidence as being more prejudicial than probative at the pretrial stage is an extreme measure that is rarely necessary, because no harm is done by admitting it at that stage. If a court believes evidence is irrelevant, it need only say so and discount it accordingly when it makes its summary judgment determination. However, a court cannot fairly ascertain the potential relevance of evidence for Rule 403 purposes until it has a full record relevant to the putatively objectionable evidence. We believe that Rule 403 is a trial-oriented rule. Precipitous Rule 403 determinations, before the challenging party has had an opportunity to develop the record, are therefore unfair and improper."

Although that opinion was issued prior to the Supreme Court's *Daubert* opinion, in a later opinion, *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717 (3rd Cir. 1994)(*Paoli II*), subsequent to the *Daubert* opinion, the Third Circuit reiterated its holding in *Paoli I* that "Rule 403 is rarely appropriate as a basis of pre-trial exclusion, because a judge cannot ascertain potential relevance until that judge has a virtual surrogate for a trial record." 35 F.3d at 747. The Third Circuit held that there trial court's *in limine* hearing created the required "virtual surrogate for a trial record." *Id.*

In its reply Philips reiterates its arguments *vis-à-vis* the alleged cumulative nature of Mr. Chandler's proposed testimony, and that his testimony would only confuse, not help, the jury. Philips also says that ZLC's argument that an exclusion under Rule 403 would be premature "makes no sense," given that the Supreme Court in *Daubert* instructed district courts to "be mindful of other applicable rules," specifically Rule 403, when "assessing a proffer of expert testimony under Rule 702." Philips' Chandler Reply [Dkt. 582] at 5. Philips says that "district courts routinely exclude duplicative expert testimony before trial." *Id.* (citing cases).

B. Discussion

Once again, Rule 702, FEDERAL RULES OF EVIDENCE, provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Philips has not asserted that Mr. Chandler's proposed testimony fails to meet the foregoing criteria, or otherwise fails to meet the *Daubert* requirements of qualification, reliability and fit. Yes, the Supreme Court in *Daubert* noted that trial courts "assessing a proffer of expert scientific testimony under Rule 702 should also be mindful of other applicable rules," including Rule 403, because, *inter alia*, "[e]xpert evidence can be both powerful and quite misleading because of the difficulty in evaluating it," 509 U.S. at 595, quoting Weinstein, Rule 702 of the Federal Rules of Evidence is Sound; It Should Not Be Amended, 138 F. R. D. 631, 632 (1991), and that has been done here.

However, although Mr. Chandler's report overlaps considerably with Dr. Vellturo's report, Mr. Chandler's report offers an additional view that Mr. Jarosz's (Philips' damages expert) $ xxxx per-unit royalty is excessive given Mr. Chandler's background in licensing.

Moreover, although trial courts certainly may exclude evidence under Rule 403 at a pre-trial stage, when appropriate in particular cases, this is not one of those cases. Quite simply, Philips has not shown that the "probative value" of Mr. Chandler's proposed testimony "is substantially

outweighed by a danger of" (1) unfair prejudice, (2) confusing the issues, (3) misleading the jury, (4) undue delay, (5) wasting time, or (6) "needlessly presenting cumulative evidence," as required by Rule 403.

Additionally, it is believed that this is an issue more appropriately addressed through a hearing on any motions *in limine*, or during trial. To the extent that ZLC proposes to actually present testimony from Mr. Chandler that is wholly cumulative to, or duplicative of, testimony by Dr. Vellturo, or otherwise meets one or more of the requirements of Rule 403, the Court can address the matter on a fuller record during an *in limine* hearing or at trial.

C. Recommendation

The master recommends that the Court DENY Philips' Motion to Exclude Testimony of Mark J. Chandler [Dkt. 462], without prejudice to filing a later motion *in limine*.

V.
Philips' Motion to Exclude Testimony of Dr. Sandor Kovacs [Dkt. 449]

A. Brief Description of Motion and Parties' Arguments

The majority of the underlying materials related to Dr. Kovacs have been submitted under seal. For example, a "Declaration of Susan Y. Tull in Support of Philips's Motion" [Dkt. 451] lists eight exhibits. The four exhibits relating specifically to Dr. Kovacs, namely:

- Exhibit 2: Excepts from the Deposition transcript of Dr. Sandor Kovacs (Aug. 23, 2016)
- Exhibit 6: Expert Report of Dr. Sandor Kovacs, June 26, 2015 * * *
- Exhibit 7: Curriculum Vitae of Dr. Sandor Kovacs
- Exhibit 8: Supplemental Expert Report of Dr. Sandor Kovacs, July 21, 2016 * * *

have all been sealed in their entirety – although in each instance, the confidentiality legend reads: "CONTAINS CONFIDENTIAL INFORMATION SUBJECT TO A PROTECTIVE ORDER." (emphasis added) That there might be "confidential information" that is "contained" in a document does not necessarily justify "sealing" the entire document.

For example, Exhibit 7, Dr. Kovacs' CV, which appears to have possibly been attached as Exhibit 1 to Dr. Kovacs' "Expert Report of Dr. Sandor Kovacs, June 26, 2015," on its face seems to be a 40 page CV listing Dr. Kovacs' work history, education, academic positions, university and hospital appointments and committees, medical licenses and certifications, honors and awards, editorial/reviewer responsibilities, professional societies and organizations, invited professorships and lectureships, consulting relationships and board memberships, research support, patents, clinical titles and responsibilities, teaching titles and responsibilities, a bibliography divided by peer-reviewed manuscripts, invited publications, and abstracts/presentations. In short, although Dr. Kovacs' CV also contains some "personal information" that perhaps can or should be redacted, the vast majority of his CV appears to be exactly that – a lengthy CV typical of someone having Dr. Kovacs' education, experience and professional career. There appears to be no justifiable reason for "sealing" the entirety of Dr. Kovacs' CV.

Similarly, Exhibit 6 is an "Expert Report of Dr. Sandor Kovacs, June 26, 2015." That report contains 548 numbered paragraphs, covering 110 pages. The 3-page "Table of Contents" (TOC) to that report, which does not appear to disclose any truly "confidential" information, provides an overview of the information contained in the report:

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Although portions of Dr. Kovacs' report may contain "confidential" information (or references to "confidential" information), it seems plain from the TOC that many portions do not – and that is confirmed by reading the report. In short, it does not appear that the entirety of Dr. Kovacs' report is required to be "sealed" to preserve truly "confidential" information.

Also, similarly, Exhibit 8, "Supplemental Expert Report of Dr. Sandor Kovacs, July 21, 2016," appears to contain much information that, at least at first blush, does not reveal truly "confidential" information. The Supplemental Report was apparently issued after, and in response to, the Court's Memorandum Opinion [Dkt. 416] and addresses claims 16 and 17 of the '454 patent.

The Supplemental Report does not contain a TOC, but the major headings are: "I. Introduction," "II. Legal Standards," "III. The Court's Supplemental Claim Construction," "IV. The 'Connecting Mechanism' of the '454 Patent," "V. Circuitry of the Accused Products," "VI. The Accused Products Do Not Infringe Claim 16 of the '454 Patent," "VII. The Accused Products Do Not Infringe Claim 17 of the '454 Patent," "VIII. Errata," and "IX. Conclusion." It is readily apparent from the headings, and even more so from the text of the report, that at least some sections, and perhaps a majority, of information in the report likely is not truly "confidential."

Nevertheless, this report and recommendation will address the parties' contentions at a "high" level that is not viewed as disclosing any "confidential" information.

Although Dr. Kovacs' CV (Exhibit 7) has been "sealed," it is not believed "confidential" to note that Dr. Kovacs' education includes a B.S. in engineering from Cornell University in 1969, an M.S. in physics from the California Institute of Technology in 1972, a Ph.D. in physics from the

California Institute of Technology in 1977, and an M.D. in medicine from the University of Miami in 1979.

Dr. Kovacs states in his "Expert Report of Dr. Sandor Kovacs, June 26, 2015" (although "sealed" this is not believed to be truly "confidential") that:

> 6. I am an expert in the fields of cardiovascular medicine and physiology. I have practiced, studied, taught and researched in this field for over thirty years. Currently, I am a Professor of Medicine, Physiology, Physics and Biomedical Engineering at Washington University in St. Louis, Missouri. I have taught medical students, interns and residents, cardiology fellows, and mentored over twenty graduate students as their Ph.D. thesis advisor over the past thirty years.
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> 7. I obtained a Bachelor's degree in Engineering from Cornell University in 1969. I received an M.S. in Physics in 1972 and a Ph.D. in Physics in 1977, both from the California Institute of Technology. I received an M.D. from the University of Miami in 1979. I am board certified in internal medicine, and in the subspecialty field of cardiovascular diseases (cardiology).
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> 8. I was the director of the John Cochran VA Medical Center's Cardiac Catheterization Laboratory from 1986 through 1990. I founded the Cardiovascular Biophysics Laboratory at the Jewish Hospital of St. Louis, at Washington University Medical Center in 1990. After the merger of Barnes and Jewish Hospitals in 1996, the Cardiovascular Biophysics Laboratory has continued its activities uninterrupted in the newly named Barnes-Jewish Hospital at Washington University Medical Center. I continue as its director today. I also work as an attending cardiologist supervising fellows, residents, interns and medical students on the inpatient cardiology service. I supervise stress tests and interpret arrhythmia detection monitor recordings. I interpret electrocardiograms and serve as an invasive cardiologist in the medical center's cardiac catheterization laboratory on a regular basis. In the course of my clinical work on the inpatient wards, in the stress testing facility and in the catheterization laboratory, the need routinely arises for me to provide defibrillation therapy for patients.
>
> 9. I am sole-author, co-author or senior author on over one hundred peer-reviewed publications. Among other things, my prior publications document my familiarity with software, code, and scientific programming methods. For example, my Ph.D. research involved solving the Einstein field equations for gravitational waves numerically using Fortan programming. As another example, my research in biophysics also involved Fortran, as well as LabView and C++. I am on the Editorial Board of the American Journal of Physiology: Heart & Circulatory Physiology and of the Cardiovascular Engineering and Technology journal. I also serve as a reviewer for fifteen other scientific journals.
>
> 10. I am also on multiple National Institute of Health (NIH) review panels and have served as Chair and Co-Chair of the American Heart Association's Cardiovascular Physiology and Pathophysiology Study Section. I have been awarded an Outstanding

> Faculty Mentor Award at the Washington University in St. Louis. I have also been awarded the Sjöstrand Medal in Physiology from the Swedish Society of Clinical Physiology and Medicine, and received a Distinguished Foreign Member award from the Hungarian Society of Cardiology.

Philips moves to exclude the "testimony and opinions of Dr. Sandor Kovacs on issues of infringement because he lacks the requisite expertise." Philips' Kovacs' Memo [Dkt. 450] at 1. Philips urges that "[t]he patents-at-issue in this case are directed to electrotherapy, which cover key concepts in electrophysiology such as tilt, impedance, and the relationship between voltage and current, as well as specific circuitry components and configurations. Dr. Kovacs' only expertise, however relates to the use of a defibrillator on patients in a clinical setting. Dr. Kovacs has never designed or built a defibrillator, studied defibrillation waveforms, or analyzed the shocks that he has delivered to patients beyond ascertaining whether a shock was successful in reviving a patient." *Id.* (emphasis by Philips).

Philips contends that "because he lacks expertise and relevant experience, Dr. Kovacs should not be permitted to testify about the meaning of various terms of art as understood by a person skilled in the field of electrotherapy and/or electrophysiology, how those terms compare to the accused products, how defibrillators and their various components operate (e.g., switches and circuitry), or any other topic that requires the expertise in either electrotherapy or electrophysiology." *Id.* Philips cites *Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1363 (Fed. Cir. 2008), for the proposition that allowing a non-expert to testify about highly technical topics constitutes an abuse of discretion.

Philips says that Dr. Kovacs conceded at his deposition that he had not studied or researched "the engineering" of defibrillators or defibrillation technology, has no "benchtop" experience researching electrophysical features, and has not written any articles on the subject of defibrillation technologies. Philips' Kovacs' Memo [Dkt. 450] at 2. Dr. Kovacs' deposition is sealed. However, in the portions that Philips references, it is perhaps more accurate to say that Dr. Kovacs testified that (1) it was "fair" to say that his research had not focused on defibrillation, (2) although he had patents, those patents were not directed to defibrillators or methods of defibrillation, (3) Dr. Kovacs had "many times" defibrillated patients using external defibrillators, but (4) in his position as professor medicine he did not "prescribe" a LifeVest to patients because such "prescriptions" were usually restricted to faculty in the electrophysiology subsection of the cardiology division.

Philips contends that "[a]ccording to Dr. Kovacs, his experience with defibrillation has been limited to that of a clinical doctor shocking a patient. At no point in his studies or during his career as

a physician, has Dr. Kovacs ever examined, researched, or worked on concepts of waveforms as they are delivered to a patient through defibrillation. According to Dr. Kovacs, 'from the perspective of the person using [the defibrillator] in a random setting, all you have available to you [] is the setting of the energy and maybe some warning things that the defibrillator tells you to stand clear so you don't shock yourself, and then it delivers the shock under the circumstances.' * * * To the extent that Dr. Kovacs is familiar with the concepts and technologies discussed in the patents, it was through his discussion with electrophysiologists, a field that Dr. Kovacs does not practice and has not studied." Philips' Kovacs' Memo [Dkt. 450] at 3.

Philips further contends that ZLC revised its proposed standard for "one having ordinary skill in the art" in conjunction with Dr. Kovacs' report in a manner that "(1) does not address the relevant field, (2) omits the fact that a high level of skill was necessary, (3) changes the requirement for an advanced degree in electrical engineering or biomedical engineering to a Medical Doctor, (4) replaces the requirement of five year's work designing defibrillators to merely five years working with cardiac medical devices, and (5) lowers the requirement that the person be 'intimately familiar' with the underlying concepts and principles to being merely 'generally familiar' with them." *Id.* at 5.

Philips urges that Dr. Kovacs (1) does not qualify as a person skilled in the art, and (2) is not an expert in the field of "waveforms used for defibrillation, and apparatus and techniques for generating and delivering such waveforms." *Id.* at 6-7. Philips argues that Dr. Kovacs should be precluded from testifying on technical issues on which he has no expertise.

ZLC says, in response, that the question is "whether an M.D./Ph.D. with decades of experience in the field of cardiology and biomedical engineering—including extensive experience with defibrillation specifically—has sufficient expertise to assist a lay jury in evaluating the topic of non-infringement in this case." ZLC Kovacs Opp. [Dkt. 543] at 1. ZLC urges that "[t]he answer to this question is an unequivocal 'yes.' " *Id.*

ZLC recounts Dr. Kovacs' education and work experience, courses he has taught that covered defibrillation topics, and his "hands-on" experience with defibrillators, concluding that Dr. Kovacs is "not only intimately familiar with the design and principles of operation for defibrillators from a theoretical point of view, but also their actual intended use and the principles of human physiology that underlie the indications of use, including an understanding as to why the delivery of certain shocks may be useful to correct these conditions." *Id.* at 3-7.

With respect to Dr. Kovacs' report, ZLC urges that "Dr. Kovacs brought all of this experience to bear in this case as an expert for ZOLL Lifecor. As a rebuttal expert, Dr. Kovacs' role was primarily directed to considering and responding to the opinions set forth in the infringement report of Philips's expert (Prof. Patrick Wolf). Dr. Kovacs performed an exhaustive analysis of these opinions including a careful review of the patents and patent prosecution history, the Court's claim construction orders and reports and recommendations of the Special Master, Prof. Wolf's report and cited materials, additional documentation regarding the accused products, and even the voluminous LifeVest software source code itself." *Id.* at 7.

ZLC also urges that "Philips's flawed Motion seeks to broadly exclude all of the non-infringement opinions set forth in Dr. Kovacs's reports without even addressing any of those opinions themselves. Indeed, Philips does not cite even a single example of such a non-infringement opinion for which Dr. Kovacs supposedly lacks the qualifications to present to a jury." *Id.* at 1.

ZLC contends that "[i]n fact, as demonstrated below, Dr. Kovacs's non-infringement opinions are all well within the scope of his expertise in the field. Many of these opinions simply comprise the straightforward application of Dr. Kovacs's (undisputed) understanding of computer programming to the LifeVest software code, leading to the conclusion that the LifeVest does not actually perform the algorithms claimed in the asserted patents. Others of Dr. Kovacs's opinions involve application of basic laws of physics such as Ohm's Law or the characteristics of electrical exponential decay. Certain other opinions focus on mistakes in the infringement analysis performed by Philips's technical expert (Prof. Wolf), such as Prof. Wolf's wholesale failure to consider certain claim limitations as construed by the Court." *Id.* at 1, and 7-12.

ZLC distinguishes *Sundance* noting that case involved proposed testimony by a patent attorney that did not have experience with the specific product claimed in the patent-in-suit, or in related fields. ZLC contrasts *Sundance* with the Federal Circuit's later opinion in *SEB S.A. v. Montgomery Ward & Co., Inc.*, 594 F.3d 1360 (Fed. Cir. 2010), in which a patent attorney was permitted to testify as an expert in a case involving deep fryers. ZLC Kovacs Opp. [Dkt. 543] at 2-3 and 12-14.

ZLC lastly urges that Dr. Kovacs meets the applicable standards for the level of ordinary skill in the art. *Id.* at 15-19.

Philips in its reply emphasizes that Dr. Kovacs lacks the requisite skill and expertise in "waveforms used in defibrillation" to offer non-infringement opinions on that technology. Philips'

Kovacs Reply [Dkt. 583] at 1. Philips also urges that Dr. Kovacs has limited experience with defibrillation waveforms and the "inner workings" of defibrillators. *Id.* at 3. In particular, Philips urges that Dr. Kovacs' opinions depend on principles of waveform technology, and that Dr. Kovacs was unable to answer questions regarding the scope of the asserted claims. *Id.*

ZLC counters in its sur-reply that Dr. Kovacs in fact has expertise in "physics" concepts of "waveform technology" urging that "[i]t strains credulity to argue that Dr. Kovacs—who holds a bachelor's degree in engineering from Cornell, a Masters and Ph.D. in physics from Caltech, has 'solv[ed] the Einstein field equations' using computer programming, and who has decades of teaching and research experience as a professor in biomedical engineering, physics, and physiology (including on defibrillator and defibrillation waveform topics)—does not have the capacity or expertise to opine on these topics." ZLC Kovacs Sur-Reply [Dkt. 639] at 3.

ZLC also points to *Holbrook v. Lykes Bros. S.S. Co., Inc.*, 80 F.3d 777, 782 (3d Cir. 1996), although the quotation allegedly from *Holbrook* that ZLC cites its brief is on a different page, and part of a quote-within-a-quote from another case. Nevertheless, the Third Circuit did comment that "[b]ecause of our liberal approach to admitting expert testimony, most arguments about an expert's qualifications relate more to the weight to be given the expert's testimony than to its admissibility. Thus, witnesses may be competent to testify as experts even though they may not, in the court's eyes, be the 'best' qualified. Who is 'best' qualified is a matter of weight upon which reasonable jurors may disagree." *Id.* In particular, the Third Circuit quoted from *Paoli I*, that "insistence on a certain kind of degree or background is inconsistent with our jurisprudence in this area. The language of Rule 702 and the accompanying advisory notes make it clear that various kinds of 'knowledge skill, experience, training or education,' Fed.R.Evid. 702, qualify an expert as such." *Id.*, quoting *Paoli I*, 916 F.2d at 855. The Third Circuit added that "it is an abuse of discretion to exclude testimony simply because the trial court does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court considers most appropriate." 80 F.3d at 782.

B. Discussion

1. Standards

Once again, Rule 702, FEDERAL RULES OF EVIDENCE, provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Philips' challenge to Dr. Kovacs' testimony rests on factor (a).

Prior to revision in 2000, Rule 702 provided:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

That was the form of Rule 702 when addressed by the Supreme Court in *Daubert*. In *Kumho*, the Supreme Court explained that "[t]his language makes no relevant distinction between 'scientific' knowledge and 'technical' or 'other specialized' knowledge. It makes clear that any such knowledge might become the subject of expert testimony." 526 U.S. at 147.

In *Paoli II*, the Third Circuit explained that "Rule 702 has two major requirements. The first is that a witness proffered to testify to specialized knowledge must be an expert. We have interpreted this requirement liberally. *See Paoli I*, 916 F.2d at 855. We have held that a broad range of knowledge, skills, and training qualify an expert as such. * * * In *Paoli I* we ruled that the district court had abused its discretion in excluding the opinions of Drs. Barsotti, Zahalsky, and Nisbet. We explained that exclusion was not the proper remedy 'simply because the experts did not have the degree or training which the district court apparently thought would be most appropriate.' " 35 F.3d at 741. The Third Circuit added that "Rule 702's liberal policy of admissibility extends to the substantive as well as the formal qualification of experts. We have eschewed imposing overly rigorous requirements of expertise and have been satisfied with more generalized qualifications." *Id.*

Also in *Paoli II*, the Third Circuit explained that the "second requirement of Rule 702 is that the expert must testify to 'scientific, technical or other specialized knowledge [that] will assist the trier of fact.' Fed.R.Evid. 702." 35 F.3d at 742. In an earlier case, *United States v. Downing*, 753 F.2d 1224 (3d. Cir. 1985), the Third Circuit held:

> We hold that the district court erred. We also hold that the admission of such expert testimony [under Rule 702] is not automatic but conditional. First, the evidence must survive preliminary scrutiny in the course of an *in limine* proceeding conducted by the district judge. This threshold inquiry, which we derive from the helpfulness standard of Rule 702, is essentially a balancing test, centering on two factors: (1) the reliability of the scientific principles upon which the expert testimony rests, hence the potential of the testimony to aid the jury in reaching an accurate resolution of a disputed issue; and (2) the likelihood that introduction of the testimony may in some way overwhelm or mislead the jury. Second, admission depends upon the "fit," i.e., upon a specific proffer showing that scientific research has established that particular features of the eyewitness identifications involved may have impaired the accuracy of those identifications. The district court's assessment of these factors will guide its discretion in deciding whether to admit the evidence under Fed.R.Evid. 702, which contemplates a liberal view toward the admissibility of expert testimony generally. The district court's ruling under Fed.R.Evid. 702 will be reviewable under an abuse of discretion standard. Finally, the district court retains discretionary authority under Fed.R.Evid. 403 to exclude any relevant evidence that would unduly waste time or confuse the issues at trial.

753 F.2d at 1226.

In *Paoli II*, the Third Circuit noted that the Supreme Court in *Daubert* had suggested several factors trial courts should take into account when assessing reliability, but noted that the *Daubert* factors were non-exhaustive. The Third Circuit noted that *Daubert* listed two factors not listed in *Downing*, and that *Downing* listed factors not listed in *Daubert*. The Third Circuit concluded that "[w]e now make clear that a district court should take into account all of the factors listed by either *Daubert* or *Downing* as well as any others that are relevant." 35 F.3d at 742. Those "combined factors are:

> Thus, the factors *Daubert* and *Downing* have already deemed important include: (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the nonjudicial uses to which the method has been put.

35 F.3d at 742 n. 8. Thus, one of the factors to be considered is "the qualifications of the expert witness testifying based on the methodology."

The Third Circuit has repeated that holding. *See e.g.*, *Oddi v. Ford Motor Co.*, 234 F.3d 136, 144-146 (3d Cir. 2000), *In re TMI Litigation*, 193 F.3d 613, 662-666 (3d Cir. 1999), and *Schneider v. Fried*, 320 F.3d 396, 404-405 (3d Cir. 2003).

In *Oddi*, the Third Circuit further explained that:

> We examine the specific testimony that was excluded here against this background. "We afford a district court's application and interpretation of Rule 702 plenary review, *Paoli II* at 749, but we review the court's decision to admit or reject testimony under an abuse of discretion standard." * * * An abuse of discretion arises when the district court's decision "rests upon a clearly erroneous finding of fact, an errant conclusion of law or an improper application of law to fact." * * * An abuse of discretion can also occur "when no reasonable person would adopt the district court's view." * * * We will not interfere with the district court's exercise of discretion "unless there is a definite and firm conviction that the court below committed a clear error of judgment in the conclusion it reached upon a weighing of the relevant factors."

234 F.3d at 146.

2. Dr. Kovacs' Qualifications

The question then becomes whether Dr. Kovacs' "qualifications" are insufficient to qualify him under Rule 702, as interpreted by foregoing, "as an expert by knowledge, skill, experience, training, or education" who "will help the trier of fact to understand the evidence or to determine a fact in issue."

One must begin with Dr. Kovacs' report of June 26, 2015 – which, as noted above, has been sealed. However, the portions referenced below plainly do not reveal any truly "confidential" information.

In paragraphs 1-3 of his report, Dr. Kovacs sets out the scope of his engagement:

> 1. I have been retained as an independent expert witness in this lawsuit by ZOLL Lifecor Corporation ("ZOLL Lifecor") to testify as a technical expert in connection with U.S. Patent Nos. 5,749,904 ("the '904 patent"), 5,593,427 ("the '427 patent"), 5,735,879 ("the '879 patent"), 5,607,454 ("the '454 patent"), and 5,749,905 ("the '905 patent") (collectively, "the asserted patents").
>
> 2. I understand that Koninklijke Philips N.V. and Philips Electronics North America (collectively, "Philips") have sued ZOLL Lifecor claiming infringement of the patents at issue. I understand that the ZOLL Lifecor product accused of infringement is the "LifeVest" wearable defibrillator, including the 3000, 3100, and 4000 models (collectively, "the accused LifeVest products").

> 3. In this expert report, I provide opinions on ZOLL Lifecor's alleged infringement of the asserted patents. I am also aware that certain experts retained by Philips have submitted reports in support of Philips's claims in this case, including opening and supplemental reports from Prof. Patrick Wolf on infringement, and an opening report from Mr. John Jarosz on damages. I have been asked to provide an analysis of and rebuttal to these expert reports as detailed further below.

Thus, Dr. Kovacs says that he expects to provide testimony as a "technical expert" *vis-à-vis* the "asserted patents," the "accused LifeVest products," and alleged infringement, together with an analysis of the reports by Prof. Wolf and Mr. Jarosz.

Second, as noted above, under the heading "Background and Qualifications," Dr. Kovacs' report states (again, although the report is designated "confidential," it is not believed that the following is truly confidential):

> 6. I am an expert in the fields of cardiovascular medicine and physiology. I have practiced, studied, taught and researched in this field for over thirty years. Currently, I am a Professor of Medicine, Physiology, Physics and Biomedical Engineering at Washington University in St. Louis, Missouri. I have taught medical students, interns and residents, cardiology fellows, and mentored over twenty graduate students as their Ph.D. thesis advisor over the past thirty years.
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> 7. I obtained a Bachelor's degree in Engineering from Cornell University in 1969. I received an M.S. in Physics in 1972 and a Ph.D. in Physics in 1977, both from the California Institute of Technology. I received an M.D. from the University of Miami in 1979. I am board certified in internal medicine, and in the subspecialty field of cardiovascular diseases (cardiology).
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> 8. I was the director of the John Cochran VA Medical Center's Cardiac Catheterization Laboratory from 1986 through 1990. I founded the Cardiovascular Biophysics Laboratory at the Jewish Hospital of St. Louis, at Washington University Medical Center in 1990. After the merger of Barnes and Jewish Hospitals in 1996, the Cardiovascular Biophysics Laboratory has continued its activities uninterrupted in the newly named Barnes-Jewish Hospital at Washington University Medical Center. I continue as its director today. I also work as an attending cardiologist supervising fellows, residents, interns and medical students on the inpatient cardiology service. I supervise stress tests and interpret arrhythmia detection monitor recordings. I interpret electrocardiograms and serve as an invasive cardiologist in the medical center's cardiac catheterization laboratory on a regular basis. In the course of my clinical work on the inpatient wards, in the stress testing facility and in the catheterization laboratory, the need routinely arises for me to provide defibrillation therapy for patients.
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> 9. I am sole-author, co-author or senior author on over one hundred peer-reviewed publications. Among other things, my prior publications document my familiarity with software, code, and scientific programming methods. For example, my Ph.D. research

> involved solving the Einstein field equations for gravitational waves numerically using Fortan programming. As another example, my research in biophysics also involved Fortran, as well as LabView and C++. I am on the Editorial Board of the American Journal of Physiology: Heart & Circulatory Physiology and of the Cardiovascular Engineering and Technology journal. I also serve as a reviewer for fifteen other scientific journals.
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> 10. I am also on multiple National Institute of Health (NIH) review panels and have served as Chair and Co-Chair of the American Heart Association's Cardiovascular Physiology and Pathophysiology Study Section. I have been awarded an Outstanding Faculty Mentor Award at the Washington University in St. Louis. I have also been awarded the Sjöstrand Medal in Physiology from the Swedish Society of Clinical Physiology and Medicine, and received a Distinguished Foreign Member award from the Hungarian Society of Cardiology.
>
> 11. Further details of my background and experience including a list of selected publications are provided in my curriculum vitae, which is attached as Exhibit 1.

The reference in paragraph 11 to "Exhibit 1" is believed a reference to Dr. Kovacs' CV discussed above.

Additionally, Dr. Kovacs provided an additional declaration [Dkt. 543-1] dated December 1, 2016, in connection with ZLC's opposition, providing:

> 1. I have been retained as an independent expert witness in this lawsuit by ZOLL Lifecor Corporation ("ZOLL Lifecor") to testify as a technical expert concerning the technology at issue in U.S. Patent Nos. 5,749,904 ("the '904 patent"), 5,735,879 ("the '879 patent"), 5,607,454 ("the '454 patent"), and 5,749,905 ("the '905 patent"). I have personal knowledge of the facts set forth in this declaration, and, if called as a witness, could and would testify competently to these facts under oath.
>
> 2. I attended and graduated from Brooklyn Technical High School, which specializes in science, technology, engineering and mathematics. I obtained a Bachelor's degree in analytical engineering in 1969 from Cornell University. My coursework at Cornell included a variety of engineering topics, including the study of electrical engineering. I pursued advanced degrees in physics at the California Institute of Technology, obtaining a Masters in 1972 and a Ph.D. in 1977. I went on to obtain an M.D. from the University of Miami in 1979. A complete description of my educational background is set forth in my expert report, and the curriculum vitae attached to my report, Ex. 2 (Expert Report) ¶ 7; id., Ex. 1 (Curriculum Vitae) at 1-2.
>
> 3. As a cardiologist and professor of Biomedical Engineering, Physics, Physiology, and Medicine, I have acquired years of experience in the field of defibrillation, and I am intimately familiar with the design, theory behind, principles of operation of, and intended use of these and other cardiac devices. My experience includes not only years of using defibrillators to defibrillate patients but also includes studying and teaching defibrillator technologies (including the waveforms they generate and deliver). For

example, during my three year cardiology fellowship from 1982 to 1985, I received training and attended lectures on pacemaker and defibrillator design and circuitry, waveform generation, and waveform effectiveness. Moreover, while the courses I currently teach are not explicitly dedicated to defibrillation, the courses I have taught over the years include topics in defibrillators and defibrillator waveforms. For example, my "Quantitative Cardiovascular Physiology" course referenced in my CV (Ex. 1 at 3), covered defibrillation topics, including electrophysiology principles that underlie defibrillation (such as voltage decay and patient impedance), and the types of waveforms used by defibrillators (such as monophasic and biphasic waveforms). Similarly, I also lecture in several other biomedical engineering courses about a variety of defibrillation topics, including interpretation of ECG signals and detection of arrhythmias, types of defibrillators (e.g., external defibrillators versus implantable defibrillators), and the relative effectiveness of different waveforms, such as the biphasic waveforms discussed in the patents.

4. I have also applied my expertise in the area of biomedical engineering and cardiology for over the last 20 years by analyzing and assessing defibrillation technologies on committees and panels in the capacity of technical reviewer or referee. For example, from the early 1990s through 2001, I served as a chair and reviewer for grant review panels of the American Heart Association where I received and analyzed submissions involving cardiac technologies and methods of defibrillation. Ex. 2 ¶ 10; id., Ex. 1 at 12-13. My analysis of these submissions often required assessing specifics of the defibrillation waveforms and the apparatus and techniques for generating such waveforms. Similarly, I also served in study sections and review panels for the National Institutes of Health from 1988 to 2016. Ex. 2 ¶ 10; Ex. 1 at 13-15. In this role, I have evaluated biomedical technologies for the United States government, including defibrillation technologies involving waveform generation and design. Among other things, I have analyzed these technologies to assess their impact on the field, the effectiveness of the proposed approach, the degree of innovation, and their ultimate commercial viability, in evaluating whether the award of a "Small Business Innovation Research" grant was appropriate.

5. In addition to my above experiences, I have maintained an active clinical practice for decades treating patients with a wide variety of cardiac conditions—including patients prescribed the LifeVest wearable defibrillator accused of infringement in this case. I have used defibrillators from a variety of manufacturers (including Philips) in hundreds of instances to save lives in a clinical setting. I am thus intimately familiar with the design and principles of operation for defibrillators from a theoretical point of view, as well as their actual intended use and the principles of human physiology that underlie the indications of use, including an understanding as to why the delivery of certain shocks may be useful to correct these conditions.

Plainly, from the "qualifications" listed in Dr. Kovacs' report, the foregoing supplemental declaration, and his CV (discussed earlier), Dr. Kovacs has extensive education and experience in engineering (including biomedical engineering), physics, mathematics, physiology, and medicine, as well as clinical experience, in connection with cardiology and defibrillation technologies.

Philips urges that Dr. Kovacs' expertise is limited to the "use of a defibrillator." But, that is plainly belied by the foregoing and Dr. Kovacs' CV. Perhaps, as Philips says, Dr. Kovacs has "never designed or built a defibrillator," but that does not diminish his extensive education and experience in the variety of sciences encompassed by defibrillation technologies.

Philips also urges that the relevant technology in this case is "waveforms used for defibrillation." Phillips' Kovacs Reply [Dkt. 583] at 1. But, Dr. Kovacs' supplemental declaration above plainly expresses a background and experience with "waveforms used for defibrillation."

3. Federal Circuit – *Sundance* – Qualifying as a POSITA

Philips urges that Dr. Kovacs' would not qualify as a person of ordinary skill in the art (POSITA) under the various formulations advanced by the parties. In particular, Philips points to the Federal Circuit's *Sundance* opinion, in which the Federal Circuit wrote:

> We hold that it is an abuse of discretion to permit a witness to testify as an expert on the issues of noninfringement or invalidity unless that witness is qualified as an expert in the pertinent art. Testimony proffered by a witness lacking the relevant technical expertise fails the standard of admissibility under Fed.R.Evid. 702. Indeed, where an issue calls for consideration of evidence from the perspective of one of ordinary skill in the art, it is contradictory to Rule 702 to allow a witness to testify on the issue who is not qualified as a technical expert in that art. We understand that patent lawyers are often qualified to testify as technical experts, but such a qualification must derive from a lawyer's technical qualifications in the pertinent art.

550 F.3d at 1363.

The patent-at-issue in *Sundance*, U.S. Patent No. 5,026,109, was drawn to a retractable segmented covering system for truck trailers, swimming pools, porches *etc.* such as shown in Fig. 2 below:

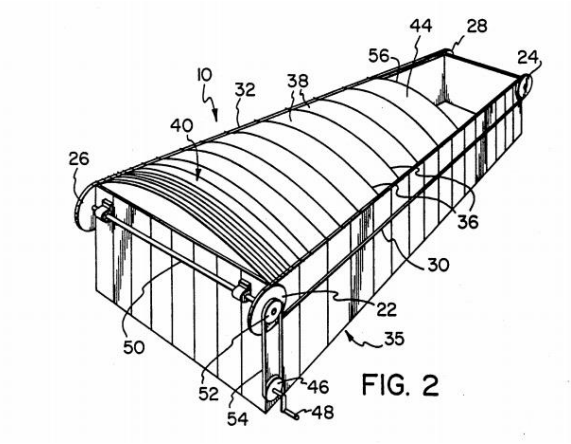

FIG. 2

During trial, the defendant's (DeMonte's) patent law expert, Daniel Bliss, testified that one of ordinary skill in the art would have been motivated to combine two prior art references which, in his view, rendered claim 1 of the asserted patent invalid as having been obvious under 35 U.S.C. § 103. A jury determined that claim 1 would have been obvious, and therefore invalid. The district court, however, granted Sundance's motion for JMOL holding that there was insufficient evidence to conclude that one of ordinary skill in the art would have been motivated to combine the teachings of the prior art. 550 F.3d at 1358-59.

There are several factors that caution against reading *Sundance* too broadly.[1] First, it appears that the Federal Circuit's comment above is *dictum*. As noted above, although the jury concluded that claim 1 of the patent-in-suit would have been obvious, the district court granted Sundance JMOL on that issue concluding that claim 1 would not have been obvious. In doing so, the district court noted Bliss' testimony, but also noted that "Bliss did not cite any references in either [prior art] patent to

[1] For example, as Philips noted in connection with its *Daubert* motion above *vis-à-vis* Mr. Chandler, "[t]he admissibility of expert testimony is a procedural issue not unique to patent law, and accordingly is governed by the law of the regional circuit." Philips' Chandler Memo [Dkt. 463] at 1, citing, *inter alia*, *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1294 (Fed. Cir. 2015)("Whether proffered evidence is admissible at trial is a procedural issue not unique to patent law, and we therefore review the district court's decision to admit expert testimony under the law of the regional circuit, here the Fifth Circuit."). The appeal in *Sundance* was from the Eastern District of Michigan, yet the Federal Circuit cites no Sixth Circuit case in support of its conclusion.

support his conclusion." The district court concluded that "[t]his evidence [Bliss' testimony], the sole evidence presented to the jury regarding this issue, does not establish that one skilled in the art would have combined Hall and Cramaro [the prior art patents], thereby rendering the invention obvious." *Sundance, Inc. v. DeMonte Fabricating Ltd.*, slip opinion, case no. 02-73543 (E.D. Mich. Sept. 20, 2006).

DeMonte appealed that JMOL (and also the district court's denial of its motion for JMOL on infringement), and Sundance cross-appealed the district court's denial of prejudgment interest. 550 F.3d at 1358. Thus, it does not appear that either DeMonte or Sundance actually appealed the district court's denial of Sundance's motion for an order *in limine vis-à-vis* Bliss' proposed testimony.

Because the district court expressly rejected Bliss' testimony and granted Sundance JMOL on the validity issue contrary to Bliss' testimony, it is difficult to see how the issue of whether the district court correctly denied Sundance's motion *in limine* was before the Federal Circuit on appeal, and even more difficult to see how the broader issue of patent attorney testimony in general was properly before the Federal Circuit for decision.

Instead, it appears that the Federal Circuit looked to two footnotes for that issue. The Federal Circuit wrote that "[i]n their appellate briefs and during oral argument, the parties disputed whether the district court properly admitted the testimony of Mr. Bliss on the issues of noninfringement and invalidity," but the actual portions of the briefs the Federal Circuit cited were a single footnote in Sundance's brief and a single footnote in DeMonte's brief. 550 F.3d at 1361. But, again, what was at issue on appeal was the district court's JMOL on the issue of validity in which the district court expressly rejected Bliss' testimony. As the district court noted, "[j]udgment as a matter of law is appropriate when 'viewing the evidence in the light most favorable to the non-moving party, there is no genuine issue of material fact for the jury, and reasonable minds could come to but one conclusion in favor of the moving party.' " *Sundance, Inc. v. DeMonte Fabricating Ltd.*, slip opinion, case no. 02-73543 (E.D. Mich. Sept. 20, 2006), quoting *Tisdale v. Fed. Express Corp.*, 415 F.3d 516, 527 (6th Cir.2005) (internal quotation marks omitted). The district court concluded, in granting the JMOL, that there was insufficient evidence to support the jury's verdict of invalidity. The issue on appeal was whether the district court was right or not in so holding. The earlier decision on the motion *in limine* was simply not before the Federal Circuit.

The Federal Circuit nevertheless wrote that "DeMonte failed to explain how Mr. Bliss possesses the relevant expertise in the pertinent art. Mr. Bliss has no experience whatsoever in 'the

field of tarps or covers.' " 550 F.3d at 1362. But neither DeMonte nor Bliss asserted that Bliss had expertise in "tarps or covers." In a footnote, the Federal Circuit noted that DeMonte had proffered Bliss as a patent law expert, not as a technical expert. 550 F.3d at 1362 n. 4. The Federal Circuit further noted that Bliss' pre-trial report opined that one of ordinary skill in the art "would be someone with a high school education and one or more years of experience in the field of tarps or covers," and noted that Bliss lacked experience in "tarps and covers." *Id.*

In actuality, Bliss' website indicates that he graduated from the Michigan Technological University with a B.S. "with high honor" in the field of mechanical engineering. http://howardandhoward.com/en/attorneys/Daniel-H-Bliss.aspx. His website also cites to the *Sundance* case. Thus, although Bliss may not have had specific experience with "tarps and covers," he plainly had experience in the field of mechanical engineering – a field encompassing at least the general technology of the patent-in-suit.

Ironically, when the Federal Circuit turned to the actual issue before the court – the JMOL – the Federal Circuit wrote that "[t]he consequence of our holding that the testimony of Mr. Bliss should have been excluded is that there was no expert testimony supporting a holding of obviousness," but added that "we conclude, however, that no such testimony was required because there are no underlying factual issues in dispute as to obviousness. The technology is simple and neither party claims that expert testimony is required to support such a holding." 550 F.3d at 1365 (emphasis added).

Thus, the Federal Circuit on the one hand held that the district court had erred in permitting Bliss to testimony because he had no experience in "tarps and covers," yet, on the other hand, also concluded that (1) the technology was "simple," (2) the "facts" were undisputed, and (3) neither party contended that expert testimony was necessary. The Federal Circuit then reversed the district court's grant of JMOL concluding "as a matter of law that claim 1 of the '109 patent would have been obvious and is therefore invalid." 550 F.3d at 1365. Thus, the Federal Circuit, while using several pages of its opinion to criticize the district court for allowing Bliss to testify, nevertheless ended by agreeing with Bliss that claim 1 of the patent-in-suit would have been obvious.

Overall, it appears that the discussion of whether the district court improperly denied the requested motion *in limine* in *Sundance* was largely, if not wholly, *dictum*. But even if not, the Federal Circuit apparently chose *Sundance* to voice its view *vis-à-vis* patent attorneys testifying on matters

outside the scope of patent procedure, unless they had specific experience in the subject matter of the invention. And that has been how *Sundance* has been characterized by the Federal Circuit. In *Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285 (Fed. Cir. 2012), for example, the Federal Circuit wrote that "[i]n *Sundance* this court held that it was an abuse of discretion to permit an attorney to testify as an expert on issues of infringement and validity, when the attorney was not qualified as an expert in the technical subject matter." 695 F.3d at 1296 (finding it was error to exclude a technical expert from testifying on validity issues because he was not an attorney).

In *SEB S.A. v. Montgomery Ward & Co., Inc.*, 594 F.3d 1360 (Fed. Cir. 2010), Pentalpha urged that the district court had based its discretion in permitting the testimony of a patent attorney, Mr. Van Horn. Mr. Van Horn had an undergraduate degree in chemical engineering from Lehigh University, a J.D. from American University, and an M.B.A. from George Washington University with a specialty in behavioral science. Mr. Van Horn had worked at the U.S. Patent & Trademark Office for 31 years in various capacities. The Federal Circuit noted that "[a]lthough he testified that he is not skilled in designing deep fryers, Mr. Van Horn explained that his experience was relevant because the claimed invention 'involves the selection of particular * * * polymer material that have certain characteristics' and that '[m]ost of the areas [he has] worked in * * * have used polymers in one form or another.' " 594 F.3d at 1373. The Federal Circuit wrote that "[t]his case comes nowhere close to the unusual situation in [*Sundance*] * * *. In *Sundance* this court held that a district court abused its discretion when it admitted the testimony of a patent law expert '[d]espite the absence of any suggestion of relevant technical expertise.' * * * Here, as explained, Mr. Van Horn had sufficient relevant technical expertise for the district court to allow him to testify. This court detects no abuse of discretion." *Id.*

Suffice it to say that the "qualifications" listed in Dr. Kovacs' report, his supplemental declaration, and his CV, plainly demonstrate more than sufficient education and experience in engineering (including biomedical engineering), physics, mathematics, physiology, and medicine, as well as clinical experience, in connection with cardiology and defibrillation technologies, namely the subject matter of the patents-in-suit, to provide reliable testimony pursuant to *Daubert* and Rule 702.

In particular, Philips says that "the patents-at-issue are all directed to waveforms utilizing patient-dependent electrical parameters and apparatus and methods for delivering the same," and that the specifications "contain a detailed discussion of the electrophysiology principles that underlie the

claimed inventions, including tilt, voltage, voltage decay, impedance, and the relationship between them." Philips' Kovacs Memo [Dkt. 450] at 1, citing the '905 patent. But the patents-in-suit are more broadly drawn to, as expressed under the heading "Background of the Invention," "[t]his invention relates generally to an electrotherapy method and apparatus for delivering a shock to a patient's heart. In particular, this invention relates to a method and apparatus for using an external defibrillator to deliver a biphasic defibrillation shock to a patient's heart through electrodes attached to the patient," '905 patent 1:9-14, and under the heading "Summary of the Invention," "[t]his invention provides an external defibrillator and defibrillation method that automatically compensates for patient-to-patient impedance differences in the delivery of electrotherapeutic pulses for defibrillation and cardioversion." '905 patent 2:34-38. The other patents-in-suit contain similar descriptions. Plainly Dr. Kovacs is well-qualified to speak knowledgeably about that field of technology.

As a result, the situation here is far removed from that at issue in *Sundance*. Moreover, with respect to the Federal Circuit's holding in *Sundance* that "it is an abuse of discretion to permit a witness to testify as an expert on the issues of noninfringement or invalidity unless that witness is qualified as an expert in the pertinent art," 550 F.3d at 1363, here Dr. Kovacs clearly is qualified as an expert in the pertinent art.

With respect to whether Dr. Kovacs meets one or more of the proposed "definitions" of "one of ordinary skill in the art" in this case, this Court has not, to-date, decided or adopted any of the proposed "definitions" because the parties have not moved the Court to do so.

As noted in the Master's Final Report and Recommendation on Claim Construction [Dkt. 204], the parties had not advocated during claim construction any particular level of ordinary skill in the art. [Dkt. 204] at 4. The parties' experts had addressed that issue in their declarations during claim construction, but those declarations were largely conclusory and lacked factual support for the exemplary, non-exhaustive factors identified in *Env'tl Design, Ltd. v. Union Oil of California,* 713 F.2d 693, 696 (Fed. Cir. 1983), namely "(1) the educational level of the inventors; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) sophistication of the technology; and (6) education level of active workers in the field."

The earlier Draft Report and Recommendation on claim construction recommended that "because neither of the parties has relied on any specific level of skill in the art, nor relied on the

differences between those experts' views, in advancing a claim construction position or argument, the master does not believe that the Court necessarily must decide the level of ordinary skill in the art at this time." Draft R&R [Dkt. 184] at 21. The Final Report and Recommendation noted that the parties had not commented on that portion of the earlier draft, and the master made the same recommendation as in the earlier draft. [Dkt. 204] at 5.

The same is true here. Neither Philips nor ZLC has pointed to a single issue of claim construction, infringement/non-infringement or validity/invalidity that turns on any particular "definition" of "one of ordinary skill in the art."

Nor have the parties done so here. Although the parties debate whether Dr. Kovacs actually meets one or more of the proposed definitions, the parties have not shown where that has an impact, or potential impact, on any portion of Dr. Kovacs' proposed testimony.

That is, Philips' expert, Prof. Wolf, in his initial report (excerpt in Dkt. 451-1), wrote that:

> 35. For the patents I have been asked to consider, a person of ordinary skill in the art at the time of the invention would be a person with a bachelor's degree in electrical engineering or its equivalent, and approximately two to three years' experience in the field of defibrillators. It is also my opinion that more education could substitute for experience, and that experience, especially when combined with training, could substitute for formal college education.

Dr. Wolf cites no factual support for that opinion, and fails to discuss any of the factors identified in *Env'tl Design*. Thus, it is wholly conclusory.

ZLC's expert, Dr. McDaniel, in his declaration offered in conjunction with ZLC's opening claim construction brief, wrote that:

> 30. I have been advised that "a person of ordinary skill in the relevant field" is a mythical person to whom an expert in the relevant field could assign a routine task with reasonable confidence that the task would be successfully carried out. Here, the relevant field is waveforms used for defibrillation, and apparatus and techniques for generating and delivering such waveforms. Because these devices are used to deliver a shock to a patient's heart, people engaged in developing these devices and related methods need to have a high level of skill. Based upon my experience in this area, one of ordinary skill in the art in this field at the relevant time frame would have had an advanced (post-Bachelor's) degree in electrical engineering, biomedical engineering, or some closely related field, with at least 5 years of work experience in one or more of these fields, and at least 5 years of experience in developing (e.g., designing or implementing) medical devices for defibrillation, pacing, and/or cardiac medical devices (which experience could have overlapped in whole or part with the at least 5 years of experience in the

> fields of electrical engineering or biomedical engineering), or the equivalent of such experience. The person of ordinary skill in the art also must have been intimately familiar with the design of, theory behind, principles of operation of, and intended use of defibrillators, as well as the principles of human physiology that underlie the indications of use for defibrillators (cardiac arrest and ventricular fibrillation), and the theories as to why the delivery of certain shocks may be useful to correct these conditions.

[Dkt. 125] at 10-11 (excerpt from earlier McDaniel's declaration saying the same in Dkt. 451-1). Like Prof. Wolf, Dr. McDaniel cites no factual support for that opinion, and fails to discuss any of the factors identified in *Env'tl Design*. Thus, this declaration too is wholly conclusory, albeit he references his "experience in the area." According to Philips, Zoll Medical, ZLC's parent company, proposed a similar definition in the co-pending litigation in the District of Massachusetts through a declaration by Dr. Kroll. [Dkt. 451-1] Ex. 5.

Philips urges that Dr. Kovacs' report changed the McDaniel definition of "one of ordinary skill in the art" to (emphasis by Philips):

> [A] person of ordinary skill in the art at the time of the alleged invention of the asserted claims would have (for example) ***attained an M.D.*** with a specialization in cardiology and/or an advanced (post-Bachelor's) degree in electrical engineering, physics, biomedical engineering, or some closely related field (***e.g.***, cardiac sciences and technology), and at least 5 years of experience in one or more of those fields, ***and at least 5 years of experience working with cardiac medical devices***, such as defibrillators and/or pacemakers (which experience could have overlapped in whole or in part with the at least 5 years of other experience mentioned above), or the equivalent of such experience. The person of ordinary skill in the art must also have been ***generally familiar*** with the design of, theory behind, principles of operation of, and intended uses of defibrillators, as well as the principles of human physiology that underlie the indications of use of defibrillators (cardiac arrest and ventricular fibrillation) and the theories as to why the delivery of certain shocks may be useful to correct those conditions.

Philips urges that "[t]his newly-minted level of skill for Dr. Kovacs testimony, however, (1) does not address the relevant field, (2) omits the fact that a high level of skill was necessary, (3) changes the requirement for an advanced degree in electrical engineering or biomedical engineering to a Medical Doctor, (4) replaces the requirement of five year's work designing defibrillators to merely five years working with cardiac medical devices, and (5) lowers the requirement that the person be 'intimately familiar' with the underlying concepts and principles to being merely 'generally familiar' with them." Philips' Kovacs Memo [Dkt. 450] at 5.

ZLC correctly notes in response that this Court has not adopted a "definition" for "one of ordinary skill in the art," and urges that "[n]evertheless, Dr. Kovacs's experience would also satisfy Dr. McDaniel's proposed level of ordinary skill if that standard were to be applied now. As indicated above, Dr. Kovacs has intimate familiarity with all of the topics set forth in Dr. McDaniel's standard. He satisfies multiple times over the requirement for a relevant graduate degree. And over the course of his decades of work in the field (including as a professor of medicine, biomedical engineering, physics, and physiology) he has had significant experience directed to both implementing (in a clinical setting) as well as analyzing and reviewing (in his panel and scientific journal referee work) studies regarding development of medical devices for defibrillation and other cardiac medical devices. * * * Dr. Kovacs's extensive educational and work experience thus satisfies Dr. McDaniel's standard, both directly as well as under what Dr. McDaniel refers to as 'the equivalent of such experience.' "

So, the parties have provided declarations by Prof. Wolf and Dr. McDaniel each of which voice their individual opinions on the characteristics of "one of ordinary skill in the art," but without any factual support whatsoever. The Supreme Court in *General Electric Co. v. Joiner*, 522 U.S. 136 (1997), however, cautioned that "nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *Id.* at 146.[2]

Similarly, the Committee Notes to Rule 702 explain that "[i]f the witness is relying solely or primarily on experience, then the witness must explain how that experience leads to the conclusion reached, why that experience is a sufficient basis for the opinion, and how that experience is reliably applied to the facts. The trial court's gatekeeping function requires more than simply 'taking the expert's word for it.' *See Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311, 1319 (9th Cir. 1995) ('We've been presented with only the experts' qualifications, their conclusions and their assurances of

[2] Although the use of Latin in court proceedings dates from the Middle Ages (some say as a way to enforce engagement of "lawyers," who studied Latin) the phrase "ipse dixit" literally means "he himself said it," and carries the connotation of "an assertion made on authority not proved", Webster's Third New International Dictionary — Unabridged (2002), or "an arbitrary statement," Webster's New College Dictionary (2001), or "an assertion made but not proved." https://www.merriam-webster.com/dictionary/ipse%20dixit, or "[a]n unsupported statement that rests solely on the authority of the individual who makes it." http://legal-dictionary.thefreedictionary.com/Ipse+Dixit.

reliability. Under *Daubert*, that's not enough.')." Rule 702, Committee Notes on Rules – 2000 Amendment.

Prof. Wolf's and Dr. McDaniel's declarations, without offering any factual support, whether in line with the factors identified in *Env'tl Design* or otherwise, present the *ipse dixit* of "Trust me. I'm an expert." Similarly, Dr. Kovacs' report expresses his opinion on the characteristics of "one of ordinary skill in the art," but again with no factual support whatsoever.

The result is that parties have presented the Court with at least three formulations stating three individual's wholly unsupported opinions of what the characteristics of a POSITA might be, all of which – on their face – are potentially plausible given the technological field of the patents-in-suit, without any factual support that would permit the Court to issue an informed judgment.

In addition to failing to provide the Court with the "tools" to ultimately conclude a set of characteristics defining a POSITA, and of equal or perhaps greater importance, the parties have failed to identify a single issue of claim construction, infringement/non-infringement or validity/invalidity that turns on a disputed difference in the several proposed "definitions" of a POSITA.

For example, yes, Dr. McDaniel opined, in part, that "one of ordinary skill in the art in this field at the relevant time frame would have had an advanced (post-Bachelor's) degree in electrical engineering, biomedical engineering, or some closely related field," while Dr. Kovacs opined that "a person of ordinary skill in the art at the time of the alleged invention of the asserted claims would have (for example) *attained an M.D.* with a specialization in cardiology and/or an advanced (post-Bachelor's) degree in electrical engineering, physics, biomedical engineering, or some closely related field (*e.g.*, cardiac sciences and technology)," but Philips has failed to identify a single issue of claim construction, infringement/non-infringement or validity/invalidity that turns on that difference in the views of Dr. McDaniel and Dr. Kovacs on the characteristics of a POSITA.

Philips obviously *sub silentio* wishes to suggest a nefarious implication – that Dr. Kovacs modified the earlier McDaniel's characteristics of a POSITA to more closely align with his own background and experience. Without deciding, perhaps that might be one inference, but it is not an inference this Court could justifiably rely on in excluding the entirety of Dr. Kovacs' report/proposed testimony. After all, another inference is simply that Dr. Kovacs perhaps disagreed with Dr. McDaniel.

4. Bases for Dr. Kovacs' Opinions

Dr. Kovacs, in his report, says that:

> III. BASIS OF OPINIONS AND MATERIALS CONSIDERED
>
> 12. In forming my opinions in this Expert Report and for expert testimony that I may be called upon to provide, I have considered and may rely on at least the documents identified in this report or identified in Exhibit 2 attached hereto. This includes, but is not limited to: the asserted patents and prosecution histories, patent contentions submitted by the parties (including all documents referred to in those contentions), expert reports, prior art references, the parties' claim construction submissions, publicly available information regarding the patented subject matter and accused products, third-party information, deposition testimony, source code for the accused products, documents produced in this action, and discovery responses, among other materials. I also have attended to patients prescribed the LifeVest product. My opinion is based on my review of such materials, together with my education, training, and experience in the relevant field.
>
> 13. In testifying, and to support or summarize my opinions, I may use some or all of the documents and information identified in this report or identified in Exhibit 2, additional information identified in discovery, as well as any materials relied upon by Philips's experts. In addition, I may supplement these materials with other materials, charts, illustrations, or diagrams to provide additional context, background, or information, and may prepare summaries and demonstrative exhibits (such as a PowerPoint presentation or live demonstration) to assist my presentation of testimony to the Court.

Thus, plainly Dr. Kovacs sets out the bases for his opinions as well as the materials he considered. And throughout Dr. Kovacs' report, he provides the bases for his opinions.

It is noteworthy that Philips has not identified any specific or particular opinion that Dr. Kovacs has offered in his report that turns on whether Dr. Kovacs has any particular "level of ordinary skill in the art." Rather, Philips' motion seeks to exclude Dr. Kovacs' report and proposed testimony as a whole.

As noted above, the Committee Notes to Rule 702, FEDERAL RULES OF EVIDENCE (2000 amendments) explain, that "[a] review of the caselaw after *Daubert* shows that the rejection of expert testimony is the exception rather than the rule. *Daubert* did not work a 'seachange over federal evidence law,' and 'the trial court's role as gatekeeper is not intended to serve as a replacement for the adversary system.' *United States v. 14.38 Acres of Land Situated in Leflore County, Mississippi*, 80 F.3d 1074, 1078 (5th Cir. 1996). As the Court in *Daubert* stated: 'Vigorous cross-examination, presentation of contrary

evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.' 509 U.S. at 595 [*sic.* 596]." *Id.*

As also noted above, more fully, the Supreme Court in *Daubert* explained that:

> Respondent expresses apprehension that abandonment of "general acceptance" as the exclusive requirement for admission will result in a "free-for-all" in which befuddled juries are confounded by absurd and irrational pseudoscientific assertions. In this regard respondent seems to us to be overly pessimistic about the capabilities of the jury and of the adversary system generally. Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. * * * Additionally, in the event the trial court concludes that the scintilla of evidence presented supporting a position is insufficient to allow a reasonable juror to conclude that the position more likely than not is true, the court remains free to direct a judgment, Fed. Rule Civ. Proc. 50(a), and likewise to grant summary judgment, Fed. Rule Civ. Proc. 56. * * * These conventional devices, rather than wholesale exclusion under an uncompromising "general acceptance" test, are the appropriate safeguards where the basis of scientific testimony meets the standards of Rule 702.

509 U.S. at 595-96. Specifically, as noted above, although the Supreme Court in *Daubert* plainly imposed a gatekeeping function on trial courts, the Supreme Court likewise expressly noted that was not intended to diminish the applicability, and importance, of the other facets of the adversarial system of resolving disputes, namely vigorous cross-examination, concise jury instructions, JMOL motions under Rule 50, FEDERAL RULES OF CIVIL PROCEDURE, and motions for summary judgment under Rule 56, FEDERAL RULES OF CIVIL PROCEDURE. Additionally, of course, there is the potential for a motion for a new trial under Rule 59, FEDERAL RULES OF CIVIL PROCEDURE.

Thus, Philips' motion to exclude Dr. Kovacs' report and/or testimony in its entirety because Dr. Kovacs lacks the "knowledge, skill, experience, training, or education" required by Rule 702, FEDERAL RULES OF CIVIL PROCEDURE, or because Dr. Kovacs fails to qualify as a POSITA and per *Sundance*, is rejected for the foregoing reasons.

5. Potential Motion *in Limine*

However, that does not necessarily preclude Philips from pursuing a motion *in limine vis-à-vis* specific allegations in Dr. Kovacs' report. For example, in paragraph 39 of Dr. Kovacs' report, Dr. Kovacs makes an assertion based on "[f]rom the perspective of one of ordinary skill in the art," because of certain statements made during the prosecution of the '905 patent, Philips had disclaimed patent scope. It is not clear, and nothing in the foregoing should be construed as deciding, that Dr.

Kovacs has the requisite "knowledge, skill, experience, training, or education" required by Rule 702, FEDERAL RULES OF CIVIL PROCEDURE, to opine on whether the patentee disclaimed subject matter during prosecution of the '905 patent.

There may – or may not be – other instances as well. Suffice it to say that the master recommends denying Philips' motion because it is based on the entire exclusion of Dr. Kovacs' report/testimony, and does so for the reasons given above. That does not necessarily preclude a motion *in limine* to exclude specific portions of Dr. Kovacs' report/testimony.

C. Recommendation

The master recommends that the Court DENY Philips' Motion to Exclude Testimony of Dr. Sandor Kovacs [Dkt. 449], without prejudice to a later motion *in limine*.

VI.
Philips' Motion to Exclude Testimony of Dr. Wayne McDaniel [Dkt. 459]

A. Brief Description of Motion and Parties' Arguments

Again, the parties' briefs and exhibits are heavily redacted because of information filed under seal. Accordingly, the briefs and arguments will be addressed on a high level.

Philips moves to exclude the testimony of Dr. Wayne McDaniel under Rules 702 and 403, FEDERAL RULES OF EVIDENCE, urging that Dr. McDaniel's proposed testimony would be cumulative to ZLC's expert, Dr. Berger. Philips' McDaniel Motion [Dkt. 459] at 1.

Philips urges that Dr. Berger's report covers some 463 pages, and addresses the alleged invalidity of U.S. Patent Nos. 5,593,427, 5,607,454, 5,735,879, 5,749,904, and 5,749,905. Dr. McDaniel's 26-page report, according to Philips, (1) addresses a number of prior art references, devoting about a paragraph to each reference," (2) "does not apply the prior art to the claims at issue," and (3) does not "perform a validity analysis for any of the asserted patent claims." Philips' McDaniel Memo [Dkt. 460] at 3. Philips says that Dr. Berger's report "covers many of the same prior art references but does so in greater detail," and "more notably, continues on to analyze the same prior art against the asserted claims." *Id.*

ZLC responds that (1) "Dr. McDaniel was one of a small group of researchers who worked in the lab led by Dr. John Schuder (the 'Schuder Lab'), which has become known for its pioneering

research on external biphasic defibrillators," (2) "The Schuder Lab first considered biphasic waveforms for defibrillation as early as the 1960s," (3) "However, it was not until several years later that they succeeded in actually building an external defibrillator capable of generating biphasic waveforms at energies suitable for human defibrillation, as described in several groundbreaking articles that the Schuder Lab published in the 1980s." ZLC's McDaniel Opp. [Dkt. 544] at 2.

ZLC urges that Dr. McDaniel's proposed testimony is based on his "extensive personal experience" and also on the results of "an exhaustive literature search that he personally performed" in response to positions Philips has taken in this case. In particular, ZLC urges that, as a result of that research, Dr. McDaniel reached a number of conclusions, which ZLC characterizes as "relevant," namely:

- "Based on the foregoing discussion and analysis of this history and the prior art, it is my opinion that the use of biphasic waveforms for defibrillation was well-known long before August 1993."
- "Those of skill in the art at the time would have been aware of a significant body of research regarding the characteristics and advantages of biphasic waveforms, including multiple viable techniques and technologies for implementing the same in both external and implantable defibrillators."
- "There was significant motivation well before August 1993 to incorporate biphasic technologies into new and existing defibrillators, and those of skill in the art would have been able to do so in a straightforward manner, without undue experimentation."
- "A significant number of techniques and technologies used to account for patient variation in the context of defibrillation therapy were likewise known in the art well before August 1993."
- "Those of skill in the art at the time had ample motivation to try these various techniques and technologies (including in connection with biphasic, external defibrillators), and it was well within the ability of those of skill in the art to do so without undue experimentation."

ZLC's McDaniel Opp. [Dkt. 544] at 4-5 (emphasis omitted).

ZLC says that "Dr. McDaniel's analysis was focused on particular issues and he was not asked to consider the ultimate issue of whether the asserted claims are valid or invalid. Instead, the topic of invalidity was fully addressed by ZOLL Lifecor's primary expert on that subject, Dr. Ron Berger." *Id.* at 5.

ZLC further urges that its damages expert, Mr. Vellturo, relied in part on Dr. McDaniel's opinion, namely "as evidence demonstrating how Philips's damages calculus had fundamentally failed to account for pre-existing technologies in the accused LifeVest products that could not be fairly attributed to the asserted patent claims in this case—including the LifeVest's use of a biphasic waveform." *Id.* at 6.

ZLC contends that Philips has presented no basis for exclusion of Dr. McDaniel's proposed testimony under Rule 702, urging (1) simply because Dr. McDaniel did not provide an ultimate opinion on invalidity does not make his opinions "not helpful" to a jury, noting that Rule 704 allows an expert witness to testify on an ultimate issue, but does not require the same, (2) Dr. McDaniel's report does not "simply parrot" the opinion of another – Dr. McDaniel drafted the report himself based on a literature search he personally performed, and had not reviewed Dr. Berger's report, and (3) to the extent that Philips urged that it was not "appropriate" for Dr. McDaniel to incorporate his personal experiences at the Schuder Lab as part of his opinions, according to ZLC "[t]his is not and cannot possibly be the law," contending that "[o]f course, experts can and do regularly bring their personal experience to bear on the issues they consider in formulating their expert opinions." ZLC's McDaniel Opp. [Dkt. 544] at 6-10. On the later point, ZLC contends that Philips' experts likewise have based their opinions on their experience. *Id.* at 10.

ZLC contends that "[i]n any event, to the extent that Philips believes that Dr. McDaniel's relevant testimony is properly characterized as percipient (non-expert) testimony falling outside the scope of Rule 702, then by Philips's own admission, it should be proper for Dr. McDaniel to provide that testimony regardless of whether or not he is qualified as an expert under Daubert (although he certainly is)." *Id.* at 11.

To the extent that Philips brings its motion under Rule 403 as "needless cumulative," ZLC urges that the motion is premature and should be addressed at the time when motions *in limine* are addressed. *Id.*, citing Practices and Procedures of Judge Nora Barry Fischer Effective February 5, 2013, *available at* <http://www.pawd.uscourts.gov/sites/pawd/files/fischer_pp.pdf>. ZLC also cites *Paoli I* for the proposition that "Rule 403 is a trial-oriented rule." The Third Circuit's *Paoli I* and *Paoli II* cases are discussed above.

ZLC also urges that Dr. McDaniel's opinions are not "cumulative" to Dr. Berger's, but rather complimentary thereto.

In its reply, Philips again asserts that Dr. McDaniel's opinions are cumulative. Philips' McDaniel Reply [Dkt. 581] at 1. With respect to Rule 403, Philips urges that "Zoll ignores the fact that Rules 702 and 403 work together and that the considerations of Rule 403 are relevant at the Daubert stage.' *Id.* at 5

ZLC in its sur-reply essentially expands on its earlier arguments. ZLC McDaniel Sur-Reply [Dkt. 634].

B. Discussion

1. Standard

Yet once again, Rule 702, FEDERAL RULES OF EVIDENCE, provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Philips' motion does not assert that (1) Dr. McDaniel is not qualified "as an expert by knowledge, skill, experience, training, or education" to voice the opinions in his reports, or (2) that his testimony is not "based on sufficient facts or data," or (3) that his testimony is not "the product of reliable principles and methods," or (4) that Dr. McDaniel has failed to "reliably appl[y] the principles and methods to the facts of the case."

Rather, Philips' motion urges that Dr. McDaniel's proposed testimony would not "help the trier of fact to understand the evidence or to determine a fact in issue" because it is allegedly cumulative to proposed testimony by Dr. Berger.

As noted above, Rule 403, FEDERAL RULES OF EVIDENCE, provides:

> The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.

Philips has not alleged that Dr. McDaniel's testimony is not "relevant." Committee Notes to Rule 403 explain that "[t]he case law recognizes that certain circumstances call for the exclusion of evidence which is of unquestioned relevance. These circumstances entail risks which range all the way from inducing decision on a purely emotional basis, at one extreme, to nothing more harmful than merely wasting time, at the other extreme." Rule 403, Notes of Advisory Committee on Proposed Rules.

Because the Rule deals with excluding what would otherwise be admissible relevant evidence, for reasons ranging from the potentially harmful ("unfair prejudice") to the potentially harmless ("wasting time"), Rule 403, on its face, requires balancing the "probative value" of such testimony against the listed factors. *Id.* And, moreover, requires that the "probative value" be "substantially outweighed" – not merely "outweighed" – by one or more of the listed factors.

As a result, the Third Circuit has cautioned that "pretrial Rule 403 exclusions should rarely be granted" and "[e]xcluding evidence as being more prejudicial than probative at the pretrial stage is an extreme measure that is rarely necessary, because no harm is done by admitting it at that stage." *Paoli I*, 916 F.2d at 859. And, the Third Circuit has held that "in order to exclude evidence under Rule 403 at the pretrial stage, a court must have a record complete enough on the point at issue to be considered a virtual surrogate for a trial record." *Id.* at 859-860.

To the extent that Philips suggests that the Supreme Court's *Daubert* opinion held that Rule 403 is "engrafted" into Rule 702, that is not what the Supreme Court said. Rather, the Supreme Court said that "[t]he inquiry envisioned by Rule 702 is, we emphasize, a flexible one," 509 U.S. at 594, and that "[t]hroughout, a judge assessing a proffer of expert scientific testimony under Rule 702 should also be mindful of other applicable rules," *id.* at 595, including, *inter alia*, Rule 403. Namely, even if proffered testimony meets the requirements of Rule 702, that does not necessarily preclude the court from excluding or limiting the proffered testimony under other applicable rules, one of which is Rule 403. But that says nothing more courts should assess proffered evidence, including scientific or expert testimony, under all applicable rules. Yes, courts certainly "may" exclude testimony pretrial under Rule 403, but that does not mean that courts "should" or "must" do so. And the Third Circuit has expressed that trial courts should be cautious in doing so.

2. "counting heads" – Duplicative/"Needlessly Cumulative" v. Complimentary Testimony

Philips urges that allowing Dr. McDaniel's testimony risks prejudicing Philips because of the risk that the jury will resolve differences in expert testimony by "counting heads." Philips' McDaniel Reply [Dkt. 581] at 5, citing *Royal Bahamian Association, Inc. v. QBE Ins. Corp.*, No. 10-21511-CIV, 2010 WL 4225947, at *2 (S.D.Fla. Oct. 21, 2010). But, as the Northern District of Alabama noted in *Abbott Point of Care, Inc. v. Epocal, Inc.*, 868 F. Supp.2d 1310, 1331 (N.D. Ala. 2012), that may be a concern when the proposed testimony of two witnesses is "exactly identical." ("If the qualifications and proposed testimony of Dr. Wickramasinghe and Dr. Olbricht were exactly identical, as Abbott suggests, the court would not allow both witnesses to testify, because doing so would waste its own time and that of the jury. As Epocal explains, however, there are significant distinctions in the two experts' relative backgrounds, perspectives, and methodologies * * *."). The court concluded that "[d]ue to the nuances in the two experts' respective backgrounds and proposed testimony, the court concludes that both should be allowed to testify at trial." *Id.* at 1332.

In *Abbott*, the Northern District of Alabama adopted the rationale of the Southern District of Alabama in *Abrams v. Ciba Specialty Chemicals Corp.*, No. 08-0068-WSB, 2010 WL 779273 (S.D. Ala. March 2, 2010), in which the district court did not exclude a second expert's testimony, but cautioned that "to the extent the two experts would offer 'identical opinions * * * based on the same underlying evidence,' one of the experts would have to be excluded as cumulative. * * * However, 'to the extent that these two experts are relying on differing lines of evidence to reach their conclusions * * *, such that their testimony is complementary rather than redundant, it will be allowed.' * * * The court therefore directed the party seeking to offer the expert testimony to 'co-ordinate the testimony * * * on direct examination to avoid unnecessary duplication and cumulative evidence, pursuant to Rule 403, Fed.R.Evid.' " 868 F. Supp.2d at 1332-33.

ZLC urges that "the nature and substance of the reports prepared by Dr. McDaniel and Dr. Berger are markedly different. Dr. Berger performed a full-blown validity analysis on a complete set of prior art references as well as non-prior-art based invalidity defenses (e.g., Sections 101 and 112). * * * Dr. McDaniel did not go through any such invalidity analysis but rather was focused on a few discrete topics such as the history and scope of prior art biphasic technologies. The narrower scope of Dr. McDaniel's report freed him to go into greater detail on these particular topics, including

consideration of publications, studies, facts, and prior art that both parties agree were not addressed by Dr. Berger (except to the extent that Dr. Berger relies upon Dr. McDaniel's analysis)." ZLC's McDaniel Sur-Reply [Dkt. 634] at 3.

Having reviewed Dr. McDaniel's and Dr. Berger's respective reports, ZLC's comments are supported. Although there is obviously some topical overlap, the reports overall present different perspectives. After all, Rule 403 does not say to preclude "cumulative testimony" *per se*, but rather "needlessly presenting cumulative evidence." (emphasis added) That proposed testimony may have overlaps because of the subject matter does not necessary equate to "needless" "cumulative testimony."

ZLC says that "Philips's imagined concerns about Dr. McDaniel's testimony are baseless for the practical reason that ZOLL Lifecor has no incentive to present cumulative testimony—much less 'needlessly cumulative' testimony—at trial. There are many claims and defenses at play and trial time will be limited. Assuming Dr. McDaniel testifies first, there will be little reason for Dr. Berger to later rehash an identical discussion and analysis of the prior art. It will make much more sense for ZOLL Lifecor to elicit from Dr. Berger testimony that will build upon the facts already established by Dr. McDaniel to establish a complete picture of the grounds of invalidity. And in the unlikely event that Dr. Berger nevertheless ends up embarking on a discussion that threatens to waste the jury's time with a mere reiteration what Dr. McDaniel's opinions, the Court will be in a much better position to rule on a targeted Rule 403 objection at that time." ZLC's McDaniel Opp. [Dkt. 544] at 12-13.

It thus appears that in light of the Third Circuit's preferred approach to deciding Rule 403 issues, and in light of ZLC's comments regarding the probable timing and nature of Drs. McDaniel's and Berger's testimony, the approach taken by the Alabama courts in *Abbott* and *Abrams* seems to be the most appropriate at this stage, as opposed to a wholesale exclusion of Dr. McDaniel's testimony on an incomplete record of how the testimony of Drs. McDaniel and Berger will actually be presented at trial.

C. Recommendation

For the foregoing reasons, the master recommends that the Court DENY Philips' Motion to Exclude Testimony of Dr. Wayne McDaniel [Dkt. 459] with the caution that to the extent Drs. McDaniel and Berger offer the same opinions based on the same underlying evidence, the testimony

of one of those experts would be excluded at trial as being "needless" "cumulative testimony" under Rule 403. However, to the extent that Drs. McDaniel and Berger are relying on differing lines of evidence to reach their conclusions, such that their testimony is complementary rather than redundant, such testimony will be allowed. The master further recommends that the Court direct ZLC to co-ordinate the testimony on direct examination to avoid unnecessary duplication and cumulative evidence, pursuant to Rule 403, FEDERAL RULES OF EVIDENCE.

VII.
ZLC's Motion to Exclude Testimony of Dr. John P. Freese [Dkt. 452]

A. Brief Description of Motion and Parties' Arguments

Yet again, much of the parties' briefing and all of Dr. Freese's report, have been filed under seal. Thus, only the highlights of Dr. Freese's background and report will be discussed here.

According to Dr. Freese's CV and report, he holds an M.D. degree with post-graduate work in emergency medicine. Dr. Freese is currently Attending Physician in the Emergency Department of Frisbie Memorial Hospital in Rochester, N.H. Prior to that, Dr. Freese served as a physician in the emergency departments of six other hospitals.

Dr. Freese also currently serves as Director of Prehospital Research for the New York City Fire Department (FDNY), and previously served its Chief Medical Director. Dr. Freese's CV, indeed, lists several positions he has held with the FDNY, and previously, various emergency medical positions he held with other fire departments and entities.

It appears that Dr. Freese began his career with certification as an Emergency Medical Technician (EMT), and has spent the majority of his career in the field of emergency medicine. Dr. Freese's report says that he has "over twenty years of experience using and overseeing the use of defibrillators." One of the defibrillators he lists is the LifeVest.

Dr. Freese's report says that he expects to offer expert opinions and testimony regarding "the clinical context of care for patients with heart disease, and specifically with sudden cardiac arrest (SCA) with defibrillating technology." His report also says that he is prepared to provide testimony "regarding the use of defibrillators in the field, including out-of-hospital use by laypersons, first responders, emergency medical service personnel, and other trained providers as well as in-patient use, including use in the emergency department, in-patient care areas and other locations."

His report contains a "background" section discussing (1) SCA and ventricular defibrillation (VF), and (2) treatment of SCA VF using defibrillation. His report includes an "anecdote" involving a customer suffering SCA at a restaurant next door to the FDNY Headquarters. His report also includes a section addressing his opinion "concerning the clinical benefits of the defibrillator features that are the subject of Philips's asserted patents." In particular, Dr. Freese's report discusses his experience with biphasic waveform and impedance compensation technology.

Dr. Freese also discusses his experience with the LifeCor LifeVest. In particular, Dr. Freese discusses an experience with an elderly patient who had been prescribed a wearable defibrillator. Dr. Freese offers opinions on patient compliance issues, using the experience with that elderly patient as an example.

ZLC moves to exclude the entire testimony of Dr. Freese. ZLC's Freese Motion [Dkt. 452] at 1. ZLC urges that Dr. Freese is expected to offer opinions on issues related to patients' compliance *vis-à-vis* the Lifecor LifeVest products, but his opinions are based on a single anecdote relating to a woman under his care for only a few hours. *Id.*

ZLC urges that during his deposition, Dr. Freese admitted that (1) he was not an expert on the LifeVest product, (2) had never prescribed a LifeVest, (3) was not aware there were different versions of the LifeVest, and (4) had no knowledge of the specifics of LifeVest technology. ZLC Freese Memo [Dkt. 455] at 1.

ZLC urges that Dr. Freese's testimony should be excluded under Rule 702 because he lacks the expertise necessary to provide expert testimony. *Id.*

In particular, ZLC notes that John Jarosz, Philips' damages expert, relies in part on Dr. Freese when giving opinions on patient compliance issues. ZLC Freese Memo [Dkt. 455] at 2. Mr. Jarosz report is also sealed. In general terms, Mr. Jarosz refers to patient compliance as a factor in evaluating wearable defibrillators. To support one sentence in his 102-page report (excluding appendices and exhibits), Mr. Jarosz cites an expert report by Dr. Mela. Mr. Jarosz, using the introductory signal "*see also*," also cites paragraph 39 of Dr. Freese's report – the paragraph in which Dr. Freese discusses the above experience with an elderly patient who had been prescribed a wearable defibrillator.

ZLC emphasizes that (1) Dr. Freese's discussion of patient compliance in his report was limited to that one experience, and (2) Dr. Freese admitted at his deposition that (A) he was not an

expert on the LifeVest product, (B) he had not seen a LifeVest defibrillate a patient, (C) had never prescribed a LifeVest, and was uncertain whether he had the credentials to prescribe a LifeVest, (D) had "no idea" there were different versions of the LifeVest, and (E) while he had a "general understanding" of the LifeVest technology, he could not speak to the "specifics"

ZLC urges that "[w]ithout knowledge of the specifics of the LifeVest, Dr. Freese lacks the necessary knowledge and technical expertise to opine on the use of the LifeVest products," and "Dr. Freese's anecdotal evidence is based on a vague and incomplete understanding of the specific patient's particular situation, and Dr. Freese's lack of knowledge regarding the specific details of the patient's medical situation make his testimony on the patient's non-compliance irrelevant and unreliable." ZLC's Freese Memo [Dkt. 455] at 2-4.

ZLC also urges that Dr. Freese's opinions regarding patient compliance issues in general should be excluded because, during his deposition, Dr. Freese (1) "admitted that he has never performed a medical device assessment of the LifeVest," (2) "could not recall whether he studied clinical literature regarding compliance rates (other than a single article not cited in his report)," (3) "has never been involved in medical device usability studies," and (4) "has never done any studies on compliance rates for the LifeVest." *Id.* at 4.

ZLC contends that Dr. Freese thus "lacks the requisite expertise or 'specialized knowledge' to testify as an expert witness on patient compliance issues concerning the LifeVest." *Id.*

ZLC also contends that any testimony regarding the clinical value of external defibrillators should be excluded. ZLC urges that "[t]he only 'clinical value of external defibrillators' that would be relevant to this litigation would have to be tied to the actual patents asserted here," but Dr. Freese, according to ZLC, testified at his deposition that he had not reviewed the patents-in-suit in this case when preparing his report in this case, and although he had previously reviewed patents, he could not recall which patents those were. ZLC's Freese Memo [Dkt. 455] at 5.

ZLC contends that "[b]ecause Dr. Freese lacks knowledge of the scope of the patent claims asserted in this litigation, Dr. Freese is unqualified to testify as to any purported clinical value of those patents." *Id.*

Philips responds that "Zoll elevates form over substance when it argues that Dr. Freese's testimony should be stricken because he is not an 'expert' on the LifeVest product *per se*. The LifeVest

is a wearable external defibrillator that produces a biphasic impedance-compensating waveform. Nowhere does Zoll dispute Dr. Freese's competency in assisting the jury on the clinical significance of this exact defibrillating waveform—just as he did at trial in Massachusetts against Zoll Medical Corp. in December 2013. This case is about the critical component found in every accused LifeVest—the biphasic defibrillating waveform that saves patients' lives—not the cotton garment attached to it. And Dr. Freese's credentials are unrivaled when it comes to opining on the clinical efficacy and use of this life-saving waveform." Philip's Freese Opp. [Dkt. 532] at 1.

Philips further responds that "Zoll also argues that Dr. Freese has become unqualified to testify about the clinical aspects in treating patients with external defibrillators since the December 2013 trial [in the Massachusetts case] because he failed to reread the patents before filing his expert report in this case and did not know exactly which of the particular Philips waveform patents from the Massachusetts case were still in this case. * * * That argument might have merit if Dr. Freese were Philips's infringement or validity expert, where element-by-element claim analyses are necessary. But he is neither. The shortcomings of Zoll's motion to preclude Dr. Freese's expert testimony can be seen in its hyperbole, where Zoll goes so far as to say that Dr. Freese 'has no knowledge of the Philips patents-in-suit.' * * * Even Zoll knows that is untrue." *Id.* at 1-2.

In particular, Philips contends that "Dr. Freese is a preeminent authority on pre-hospital medicine, resuscitation, and defibrillation." *Id.* at 2. Philips further contends that Dr. Freese has expertise the field of biphasic waveform technology. *Id.* at 4-5. Philips also contends that "Dr. Freese also has experience with wearable defibrillators and the LifeVest in particular," and "[i]n his role as an attending physician, Dr. Freese has treated thousands of patients, some of whom have been prescribed a wearable defibrillator." *Id.* at 5-6

Philips urges that Dr. Freese has the "specialized expertise" to testify on the clinical value of external defibrillators as required by Rule 702 because: (1) "Dr. Freese is an EMT, paramedic, and physician board certified in emergency medicine," (2) "[h]e has been using defibrillators for over 25 years," (3) he "has defibrillated over a thousand patients during his career, in many instances with Philips defibrillators that use impedance compensated biphasic technology," (4) he "has used almost every AED on the market," and (5) he "has such extensive experience with the clinical use of external defibrillators that he teaches police officers, firefighters, EMTs, paramedics, medical students, *and other doctors* how to use external defibrillators." *Id.* at 8 (emphasis by Philips).

Philips further urges that Dr. Freese has the "specialized expertise" to qualify as an expert "on the impedance compensated biphasic technology at issue in this case," pointing to Dr. Freese's experience in teaching that technology to emergency and medical personnel. *Id.* at 8-9.

Regarding Dr. Freese's knowledge of the patents-in-suit, Philips notes that Dr. Freese had reviewed those patents in connection with the earlier trial in the Massachusetts case, and testified about the clinical efficacy of the "impedance-compensated waveform technology in Philips's waveform patents" during the December 2013 trial in Massachusetts. *Id.* at 9-10. Philips notes that Dr. Freese submitted his report in the current case fifteen months after his testimony in the Massachusetts case. *Id.* at 10. Philips questions, rhetorically, whether Dr. Freese became disqualified in the interim because he had not reread the patents-in-suit. *Id.*

Philips urges that Dr. Freese's lack of knowledge of the patents-in-suit is "hypertechnical nitpicking" that is "irrelevant under *Daubert*." *Id.* Rather, Philips urges that the Court should focus on Dr. Freese's prior experience. *Id.*

With respect to damages, Philips urges that "Dr. Freese is a clinical expert testifying about '[t]he use of external defibrillators, their clinical value, the clinical value of certain aspects of external defibrillators and their role in resuscitating patients or saving lives, to use the term.' " *Id.* at 11-12, pointing to a portion of Dr. Freese's deposition that has been sealed. Philips urges that "[t]o the extent Mr. Jarosz relied on Dr. Freese's clinical opinions, he is permitted to do so." *Id.* at 12.

With respect to Dr. Freese's testimony *vis-à-vis* patient compliance issues, Philips contends that ZLC's argument that Dr. Freese relied on a "single anecdote involving the LifeVest" ignores "the fact that the LifeVest is a wearable external defibrillator that produces a biphasic impedance-compensating waveform. Nowhere does Zoll dispute Dr. Freese's competency in assisting the jury on the clinical significance of this exact defibrillating waveform—just as he did at trial in Massachusetts against Zoll Medical Corp. in December 2013." *Id.*

Philips contends that "Dr. Freese has had significant experience with the LifeVest and compliance issues related to the LifeVest beyond one anecdote." *Id.* Although much of Philips' brief has been redacted, Philips contends that (1) "[a]s an attending physician, Dr. Freese has treated thousands of patients, including at least two to three each month who have been prescribed the LifeVest," (2) "Dr. Freese understands how the LifeVest works, has conducted trainings related to the LifeVest, and has personally treated LifeVest patients," and (3) "because the LifeVest is a wearable

external defibrillator, all of Dr. Freese's experience, training, and education on external defibrillators generally are pertinent to his knowledge of the LifeVest." *Id.* at 12-13.

In reply, ZLC urges that Philips has mischaracterized its arguments, and "inflated" Dr. Freese's qualifications. ZLC's Freese Reply [Dkt. 578] at 1.

On patient-compliance issues, ZLC urges that "Dr. Freese's emergency medicine experience, however, cannot mask that he lacks any 'specialized knowledge' on LifeVest compliance issues—making his testimony inadmissible, rather than merely not credible." *Id.* (emphasis omitted) ZLC, quoting *Whole Woman's Health v. Hellerstedt*, 136 S. Ct. 2292, 2317 (2016) (quoting Fed. R. Evid. 702), "an expert may testify in the 'form of an opinion' as long as that opinion rests upon 'sufficient facts or data' and 'reliable principles and methods,' " urges that "[h]ere, Dr. Freese's opinion rests on neither, and therefore must be excluded." ZLC Freese Reply [Dkt. 578] at 1.

ZLC contends that Dr. Freese's experience with LifeVest products was "ephemeral and second-hand," and "though Dr. Freese may interact with patients who have been prescribed the LifeVest (albeit infrequently), he has no meaningful experience with the LifeVest itself, much less patient compliance issues relating to the LifeVest." *Id.* at 2.

ZLC urges that it is not arguing that Dr. Freese's testimony should be excluded because a lack of "hands-on" experience, but because "Dr. Freese is unqualified to testify both because of his general lack of knowledge of the LifeVest, as well as his specific lack of knowledge regarding LifeVest patient compliance issues." *Id.* at 3.

ZLC also contends that Dr. Freese made no connection between the clinical benefits of external defibriallators and the specifc patent-in-suit. *Id.* at 3-5. ZLC urges, *inter alia*, that "[f]irst, Philips's argument that Dr. Freese has knowledge of the patents based on his work in the Massachusetts case fails because that case only involved two of the 16 claims at issue here. * * * At a minimum, therefore, Dr. Freese lacks knowledge as to the 14 other asserted claims in this case." *Id.* at 4.

ZLC further urges that "Philips also argues that case law on damages experts is inapplicable to Dr. Freese because he does not opine on damages. * * * Yet Philips also openly admits that Dr. Freese's testimony is irrelevant to infringement or validity. * * * The only possible relevance of Dr. Freese's 'clinical benefits' testimony is for damages, and indeed, Dr. Jarosz relies on Dr. Freese's

opinion in his damages analysis. Therefore, it makes no sense for Dr. Freese to testify as to 'clinical value of the patented features' for damages purposes given he cannot separate out the value of the actual patented features from clinical benefits of external biphasic defibrillators in general. The fact that Dr. Freese does not provide Philips's ultimate opinion on damages should not shield him from the rule that damages must be carefully tied the actual claimed invention." *Id.* at 5.

Philips argues in its sur-reply that "Dr. Freese understands the claims, is an expert in the patented technology, and has previously testified about that technology as an expert in both the *Markman* proceedings in this case and the jury trial in Massachusetts. Zoll also tries to minimize Dr. Freese's significant clinical experience with the LifeVest despite the fact that the LifeVest uses a biphasic impedance-compensating waveform for which Dr. Freese has specialized expertise. Dr. Freese has treated patients who have been prescribed the LifeVest, reviewed clinical literature on the LifeVest, and encountered LifeVest compliance issues firsthand. Faced with these exemplary qualifications, Zoll inflates the standard for expert qualifications to require more than is required by the Third Circuit. Zoll's arguments go to the weight of Dr. Freese's testimony, not the admissibility."

B. Discussion

There appear to be two disputes regarding Dr. Freese's proposed testimony. Namely, disputes regarding Dr. Freese's proposed testimony regarding (1) "patient compliance" issues, and (2) the "clinical value of external defibrillators."

1. "Patient Compliance"

a) Identifying Report

Rule 26(a)(2), FEDERAL RULES OF CIVIL PROCEDURE, provides, in part:

> (2) Disclosure of Expert Testimony.
>
> (A) In General. In addition to the disclosures required by Rule 26(a)(1), a party must disclose to the other parties the identity of any witness it may use at trial to present evidence under Federal Rule of Evidence 702, 703, or 705.
>
> (B) Witnesses Who Must Provide a Written Report. Unless otherwise stipulated or ordered by the court, this disclosure must be accompanied by a written report—prepared and signed by the witness—if the witness is one retained or specially employed

> to provide expert testimony in the case or one whose duties as the party's employee regularly involve giving expert testimony. The report must contain:
>
> > (i) a complete statement of all opinions the witness will express and the basis and reasons for them;
> >
> > (ii) the facts or data considered by the witness in forming them;
> >
> > (iii) any exhibits that will be used to summarize or support them;
> >
> > (iv) the witness's qualifications, including a list of all publications authored in the previous 10 years;
> >
> > (v) a list of all other cases in which, during the previous 4 years, the witness testified as an expert at trial or by deposition; and
> >
> > (vi) a statement of the compensation to be paid for the study and testimony in the case.
> >
> > * * * * *
>
> (E) Supplementing the Disclosure. The parties must supplement these disclosures when required under Rule 26(e).

Insofar as relevant here, Rule 26(a)(2)(B)(i) requires "a complete statement of all opinions the witness will express and the basis and reasons for them."

It appears from the parties' submissions that Dr. Freese submitted an "Expert Report of John P. Freese, M.D." which, on its face, was signed on March 26, 2015, and which is attached as Ex. 12 (sealed) [Dkt. 495-11] to ZLC's Memorandum in support of its motion. A declaration submitted in support of ZLC's motion [Dkt. 458] similarly lists, *inter alia*, the following *vis-à-vis* Dr. Freese:

> 14. Attached hereto as Exhibit 12 is a true and correct copy of the Expert Report of John P. Freese, M.D., dated June 26, 2015.
>
> 15. Attached hereto as Exhibit 13 is a true and correct copy of the Deposition Transcript of John P. Freese, dated August 3, 2016, except as modified by Dr. Freese's signed errata, dated September 8, 2016.
>
> 16. Attached hereto as Exhibit 14 is the Errata Sheet submitted by Dr. John Freese on September 8, 2016.

Thus, it would appear that ZLC's motion is directed to Dr. Freese's report (Exhibit 12), but Dr. Freese's report (Exhibit 12) plainly has a "signed" date of "3/26/2015," namely March 26, 2015. ZLC's declaration [Dkt. 458], on the other hand, refers to "Exhibit 12" as "dated June 26, 2015." But Exhibit C to Philips' Opposition is also a sealed copy of Dr. Freese's report signed "3/26/2015." As

a consequence, it is assumed that the only report that Dr. Freese has made in this case is the report signed "3/26/2015," and that ZLC's declaration stating "June 26, 2015," is erroneous – and should have stated "March 26, 2015." That is, insofar as the master is aware, the only report by Dr. Freese that is at issue here is his report signed on March 26, 2015.

b) Basis for Opinion vs. Breadth of Opinion

Turning to Dr. Freese's "sealed" report (Exhibit 12), that report covers 19 pages (excluding appendices (Dr. Freese's lengthy CV and a list of "Materials Considered")), and 41 numbered paragraphs.

The only paragraph in that report that ZLC has specifically referenced is paragraph 39, which, as noted above, recounts an incident with an elderly patient who had a prescribed wearable defibrillator, but apparently was not wearing the same at the time of a cardiac event. In that paragraph, Dr. Freese recounts a conversation he had with that patient.

In the same paragraph, Dr. Freese additionally offers a statement expanding on his experience with that one patient ("a compliance issue that is not * * *"), and an opinion beginning with: "This issue of compliance is especially important with a wearable defibrillator * * *." And concludes that: "Thus, * * * [referring to certain attributes]" could increase patient compliance.

In context, Dr. Freese's opinion *vis-à-vis* "patient compliance" appears to be based on that single patient experience, as reflected in paragraph 39 of his expert report. That is also the sole paragraph referenced in Mr. Jarosz' expert report, using the introductory signal "*see also*," citing paragraph 39 of Dr. Freese's report.

Earlier in his report, Dr. Freese says, *inter alia*, that: (1) "My experience with the Zoll LifeCor LifeVest, like my experience with defibrillators in general, comes from both the educational and clinical care setting," (2) "While working with the FDNY, I was approached by one of our paramedics during an educational session and asked about these devices. * * * This inquiry led me to learn more about these devices and to incorporate a discussion of those devices into that lecture during later sessions," and (3) "I have also had the opportunity to provide clinical care for patients in the emergency department who have been prescribed a wearable defibrillator." Freese Report ¶¶ 36-38. And, of course, as outlined above, Dr. Freese plainly has many years of experience in emergency medical care.

But that general experience does not necessarily qualify Dr. Freese to venture an opinion broadly about "patient compliance" issues with wearable defibrillators, specifically Dr. Freese's statements in paragraph 39 of his report "a compliance issue that is not * * *," the sentence beginning with: "Factors that lead to * * *," and the conclusion that: "Thus, * * * [referring to certain attributes]" could increase patient compliance.

Once again, the only support for those broad statements set out in Dr. Freese's report is an experience with one patient. And experience with one patient simply does not support the broad statements/conclusions above that Dr. Freese voices.

Assuming without deciding that Dr. Freese's testimony regarding the experience he had with that patient (as opposed to his broad statements/conclusions) as expressed in paragraph 39 of his report is otherwise admissible (for example, not outside the scope of Rule 703, *etc.*), there is no justifiable reason under Rule 702 to exclude that testimony. Indeed, to the extent that Dr. Freese can testify to first-hand knowledge, that would appear to be simply factual testimony. "An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed." Rule 703, FEDERAL RULES OF EVIDENCE.

In the sentence in paragraph 39 his report that begins "The result is that," the first clause seems to again be based on Dr. Freese's experience with this patient. And that would be admissible. The second clause in that sentence though expands Dr. Freese's opinion beyond his experience with that patient, and Dr. Freese's general experience would not seem to qualify him to make that statement.

Indeed, that second clause refers to how "unique" patient compliance is, and that would seem to require a study or other research to determine "uniqueness" – and Dr. Freese has not conducted such a study or research.

The next sentence that begins "The issue of compliance * * * patient's life" would be admissible because it appears to be supported by Dr. Freese's past educational and personal experience. It also is a matter of common sense.

However, the next two sentences, "Factors that * * *" and "Thus, * * *can help * * *" again make broader statements, or draw broader conclusions, than justified by Dr. Freese's past educational

and personal experience. Again, those statements would seem to require a report, or study, or research, all of which Dr. Freese has not done.

Namely, Dr. Freese's background and experience may enable him to speak knowledgeably about defibrillators, but Dr. Freese points to no clinical study (subject to the caveat below) or other work undertaken by Dr. Freese that would offer support for that broader conclusion or opinion.

In particular, Dr. Freese during his deposition testified that he was opining on patient compliance issues based, in part, on "personal experience having seen this issue in more than one patient that I've care for," Freese Depo. [Dkt. 458-13] 49:2-9 (he also referred to a "reference" that was later identified as a "WEARIT article, discussed further below), Dr. Freese also did not specifically refer to any patients other than the one patient in either his report or during his deposition, testified he had not performed any assessment of the LifeVest product, had not done clinical literature studies (subject to an exception, discussed below) on compliance rates for the LifeVest product, had not done any studies on compliance rates for the LifeVest, *etc.*:

Q Have you ever performed an assessment of the LifeVest?
A No.
Q Have you ever done -- other than the article that you referenced regarding the LifeVest, have you ever studied any other clinical literature regarding compliance rates for the LifeVest?
A Not that I can recall at the moment.
Q Have you ever yourself done any studies on compliance rates for the LifeVest?
A No.
Q Do you have any experience with medical usability studies?
A I have never been involved in those.
Q Have you ever done any studies on

1 the LifeVest in general?
2 A No.
3 Q Are you aware that there were
4 earlier versions of the LifeVest that are not
5 accused in this litigation?
6 A Until you had asked me today about
7 which version, I had no idea there were
8 different versions.
9 Q So you haven't studied compliance
10 rates of those earlier versions?
11 A I wasn't aware there were versions,
12 so no.

Freese Depo. [Dkt. 458-13] 54:8-55:12. Subject to a caveat below, testimony concerning patient compliance in general, *i.e.*, beyond Dr. Freese's personal experience, would be outside the scope of Rule 702(b) limiting an expert's testimony to being "based on sufficient facts or data," and outside the scope of Rule 703, limited to "facts or data in the case that the expert has been made aware of or personally observed."

In summary, in paragraph 39 of his report, Dr. Freese, subject to the caveat below, should be precluded from offering the opinions contained in the clause "a compliance issue that is not * * *," the sentence beginning with: "Factors that lead to * * *," and the conclusion that: "Thus, * * * [referring to certain attributes]" could increase patient compliance.

c) "WEARIT article"

A caveat to the foregoing is that Dr. Freese testified during his deposition that he considered a "WEARIT article" in forming his opinion in paragraphs 23 and 39. Freese Depo. [Dkt. 458-13] 84:3-15. That article appears as entry 35 on Exhibit B to Dr. Freese's report, and appears to be the results of a study by A.M. Feldman *et al.* That article is not included among the parties' submissions.

When ZLC urges above that Dr. Freese's opinions regarding patient compliance issues in general should be excluded because, during his deposition, Dr. Freese "could not recall whether he studied clinical literature regarding compliance rates (other than a single article not cited in his report)," presumably ZLC is referring to that "WEARIT article."

Although that "WEARIT article" was not "cited" in the body of Dr. Freese's report, that article was nonetheless included in an appendix to his report containing a listing of materials he had considered in preparing his report.

Specifically, the "WEARIT article" is not expressly cited in either paragraph 23 or paragraph 39 of Dr. Freese's report. Nevertheless, Dr. Freese, during his deposition, referred to that article, initially without specifically identifying it (red boxes added):

Q What aspect of the LifeVest was uncomfortable for the patient?
A In particular, it was the device's exacerbation of her underlying back pain. Whether that was the weight or the configuration, I don't recall.
Q And how did it exacerbate her back pain?
A It made it worse.
Q Do you know specifically what kind of back pain she was experiencing?
A My recollection is that she had chronic low back pain and that that is what was made worse.
Q Do you know how much a LifeVest weighs?
A Again, I recall looking at information, some publications about the device and its weight, and I believe there

was also a mention of the device's weight in the article that I referred to before, but I don't recall the exact weight off the top of my head.

Q Could it have been the fit of the garment that made the LifeVest uncomfortable for this particular patient?

MR. MROZ: Objection. Calls for speculation.

A I don't remember whether it was the weight or the sizing or the configuration of the vest. I don't recall which of those issues it was.

Q Okay.

I'm going to point up to the same paragraph 39 on page 17, sort of the middle of the paragraph, you say, "The result is that she would often keep the defibrillator with her but not wear it, a compliance issue that is not unique to this patient."

What do you mean by a "compliance" issue?

A Compliant with the way the device is to be utilized, which is to be worn at all times.

Q And how do you know that the compliance issue was not unique to this particular patient?

A Both from personal experience, having seen this issue in more than one patient that I've cared for, and also from that aforementioned reference that I neglected to cite.

Q So in your report you don't cite anything to support that?

A No, that was -- this, in that previous paragraph, I can recall from writing these sections, that I was alluding to the information in that article, as well as my experience.

But no, I did not cite that article here.

Freese Depo. [Dkt. 458-13] 47:7-49:18. And additionally:

Q And what is the article that you were referring to earlier?
A So on page 3, the last item, No. 35, the -- the WEARIT trial.
Q And is this the only clinical literature that you've viewed regarding the LifeVest?
A This is the one that I recall reference -- or that I recall referring to when discussing the compliance with wearing the vest.
Given the educational activities, I'm sure I've looked at others; but specifically to the point of what I mentioned earlier, this was the reference I was talking about, yes.

Freese Depo. [Dkt. 458-13] 56:11-57:1. And:

Q Would you agree that the LifeVest has saved the lives of patients who have worn the LifeVest?
MR. MROZ: Objection. Calls for speculation.
A Based upon the information that I recall from the WEARIT trial, that Citation 35, there have been successful resuscitations using the LifeVest.
So to that extent, I have no doubt that they contributed to the extension of those patients' lives.

Freese Depo. [Dkt. 458-13] 72:4-15. And:

Q So I'm going to direct you to Exhibit 3 again, your Appendix B.
A Yes.
Q For Cite 35, the Feldman article, do you recall when you first read the article?
A I believe the first time I read this article was in preparing to write my record.
Q And how did you obtain the article?
A This is something I found when I was doing online research, trying to learn about the device and science related to the device.
Q And how did you conduct this research?
A I went into the usual medical search tools, like PubMed, and the ones I frequently use. One at the time -- it no longer exists. I believe it was called MD Consult. It was a proprietary company from which you could pull research article.
Q And were you given any articles or materials from counsel in preparing your report?
MR. MROZ: I caution you not to reveal any attorney communications.
A The materials listed in the materials considered list, some of those were provided by counsel.
In looking at the list, I would say that anything listed as a user guide or patent or deposition manuscript, those things were provided by counsel.
Most all others were items that I provided to counsel or as part of the deposition -- part of the report being prepared.

Freese Depo. [Dkt. 458-13] 78:6-79:18. And, on direct examination:

Q I'd like to direct your attention, Dr. Freese, to the WEARIT article on the last page of Appendix B.
A Yes.
Q Did you consider it in forming your opinion in your expert report?
A I did.
Q Specifically, did you consider it when forming your opinions in paragraph 23?
A Yes, paragraph 23 and 39, as we've previously discussed.
Q That was going to be my next question, paragraph 39.

Freese Depo. [Dkt. 458-13] 84:3-15.

Thus, the "WEARIT article" appears to be an article that Dr. Freese located in a literature search in the process of preparing his report. Again, although included in Appendix B ("Materials Considered") to Dr. Freese's report, as item 35, that article was neither directly cited in Dr. Freese's report, nor expressly discussed. Indeed, the only mention of that article in Dr. Freese's report is the listing in Appendix B.

Accordingly, it is currently unknown (1) what that article says, (2) whether that article is admissible or inadmissible, (3) what specifically in that article Dr. Freese relied on (again, the article is not cited or discussed in the body of Dr. Freese's report), and (4) whether and to what extent (if any) that article may be relied upon, or disclosed to a jury, under Rule 703, FEDERAL RULES OF EVIDENCE.

And regardless whether the "WEARIT article" may provide support for Dr. Freese's broader statements/conclusions ("a compliance issue that is not * * *," "Factors that lead to * * *," and "Thus, * * * [referring to certain attributes]") in the master's view, there is a serious question whether Dr. Freese may rely on that article – namely, whether Dr. Freese's report, insofar as that article is concerned, complies with Rule 26(a)(2)(B)(i), FEDERAL RULES OF CIVIL PROCEDURE. Unfortunately, the parties have not addressed that issue in their submissions.

Rule 26(a)(2)(B)(i) requires "a complete statement of all opinions the witness will express and the basis and reasons for them." (emphasis added) In some portions of his report, Dr. Freese cites

to specific publications – for example, paragraph 17 (citing to 2010 American Heart Association Guidelines), paragraph 20 (citing a JAMA article), and paragraph 25 (citing to a "Resuscitation" article), paragraph 26 (citing two articles). But, again, the "WEARIT article" is nowhere cited or discussed in the body of Dr. Freese's report.

On the one hand, because the "WEARIT article" is cited on Appendix B ("Materials Considered") to Dr. Freese's report, there may have been "technical" compliance with Rule 26(a)(2)(B)(ii) (requiring a disclosure of "the facts or data considered by the witness in forming them," namely the expert's opinions). But, on the other hand, it would be potentially dangerous precedent to permit a witness to provide expert testimony based on a report or study when that witness' Rule 26 report only references that report/study on an appendix listing "Materials Considered."

Although Dr. Freese's deposition testimony suggests that his failure to cite or discuss the "WEARIT article" in the body of his report was an oversight, even innocent oversights sometimes have consequences. And it does not appear that Dr. Freese has filed a supplemental report under Rule 26(a)(2)(E), and Rule 26(e).

But, on the other hand, it is not readily apparent that Dr. Freese would be required to do so (Rule 26(e) exempts "if the additional or corrective information has not otherwise been made known to the other parties during the discovery process or in writing." Dr. Freese's reliance on the "WEARIT article" was plainly "made known" to ZLC during his deposition).

Again, the parties have not addressed the foregoing Rule 26 issues in their submissions.

d) Conclusion

Under the circumstances, the master recommends that the Court DENY ZLC's motion *vis-à-vis* the "patient compliance" issue, without prejudice to later filing a motion *in limine*.

Dr. Freese's background, and experience with the one patient he specifically mentions in his expert report, are insufficient under Rule 702 and *Daubert* to support his broader assertions in paragraph 39, namely the clause "a compliance issue that is not * * *," the sentence beginning with: "Factors that lead to * * *," and the conclusion that: "Thus, * * * [referring to certain attributes]" could increase patient compliance.

However, Dr. Freese also plainly testified that he relied on the "WEARIT article" in reaching those conclusions. And that article, at least insofar as it appears from the current submissions,

potentially falls within the class of materials permitted by Rule 703, although nothing herein should be understood as voicing any view, on way or the other, on that issue.

The "WEARIT article" is not among the parties' submissions, so it is not possible to currently determine the scope and substance of that article. But, whether that article actually supports Dr. Freese's broader assertions seems to fall squarely within the scope of "vigorous cross-examination" envisioned by *Daubert*.

In connection with any subsequent motion *in limine*, nothing said herein should be understood or interpreted as voicing any view whatsoever on (1) whether Dr. Freese may properly rely on the "WEARIT article" pursuant to Rule 26, given his failure to cite the article in the body of his report, (2) whether ZLC suffered any prejudice during his deposition as a result of failure to cite the article in the body of his report, (3) whether the "WEARIT article" may be properly considered under Rules 703 and 705, or (4) whether the "WEARIT article" provides actual support for Dr. Freese's broader assertions.

2. "Clinical Value of External Defibrillators"

a) Dr. Fresse's Deposition

During his deposition, on direct examination, Dr. Freese was asked, and he answered:

Q That was going to be my next question, paragraph 39.
You were asked earlier whether you are an expert on the LifeVest. I just want to ask you some questions about that.
What are your expert opinions in this case directed to in terms of the subject matter?
A The use of external defibrillators, their clinical value, the clinical value of certain aspects of external defibrillators and their role in resuscitating patients or saving lives, to use the term.
Q Do you view the contents of your expert report -- excuse me, strike that.
Do you view the contents of your report as expert opinions?
A I do.

Freese Depo. [Dkt. 458-13] 84:14-85:6. Notably, Dr. Freese made no mention in his report covering, or his potential testimony addressing, Philips' patents, the scope of the claims of those patents, or "specifics" regarding the accused LifeVest products.

b) Dr. Freese's Report

Dr. Freese's report, although sealed, was extensively discussed during his deposition, which was not sealed – or, at least, that is unclear (Dkt. 458, para. 15, Dkt. 458-13 (not indicated as sealed), *but see* Dkt. 533, indicating that Ex. D, Freese deposition indicated as "confidential"). In any event, every effort has been made to avoid revealing "confidential" information.

Again, Dr. Freese's report consists of 41 numbered paragraphs, and 19 pages (excluding appendices). Paragraphs 1-3, under the heading "Introduction," simply outline his involvement with this case, namely he was retained "as an independent consultant by Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P. on behalf of Plaintiffs Koninklijke Philips Electronics N.V. and Philips Electronics North America Corporation (collectively 'Philips') to investigate and opine on certain issues related to the clinical benefits of the defibrillator features that are the subject of Philips's asserted patents. In particular, I am opining on the biphasic waveform with impedance compensation."

Paragraphs 4-8, under the heading "Professional Experience," are devoted to the same. Paragraph 9, under the heading "Education," is likewise devoted to the same. Paragraphs 10-13, under the heading "Research, Publications and Presentations," are also devoted to the same. Paragraphs 14-15, under the heading of "Experience with Defibrillators" are similarly devoted to the same.

Under the heading "Clinical Benefits of the Features Patented by Philips," Dr. Freese says in paragraph 16:

> 16. If called to testify at trial, I may offer expert opinion and give testimony regarding the clinical context of care for patients with heart disease, and specifically with sudden cardiac arrest (SCA) with defibrillating technology. I am prepared to give testimony regarding the use of defibrillators in the field, including out-of-hospital use by laypersons, first responders, emergency medical service personnel, and other trained providers as well as in-patient use, including use in the emergency department, in-patient care areas and other locations.

Thus, despite the heading, this paragraph suggests that Dr. Freese's testimony will not focus on, or be specifically limited to, "Features Patented by Philips." Indeed, the substance of that paragraph does not mention "Features Patented by Philips" at all, irrespective of the heading.

Dr. Freese's report next includes a "Background" section that first addresses, under the heading "Sudden cardiac arrest and ventricular fibrillation," that topic in paragraph 17. The next "Background" section is entitled "Treatment of SCA V-FIB," and in paragraphs 18-28, generally discusses that topic. Throughout the discussion, there is no mention of Philips' patents – namely, this section is devoted to general background.

Dr. Freese's next major heading in his report is "B. Proven Benefits of Treatment of CSA [*sic.* "SCA" ?] with External Defibrillators with the Philips' Patented Features." In paragraph 29, Dr. Freese says:

> 29. I have been asked to express my opinion concerning the clinical benefits of the defibrillator features that are the subject of Philips's asserted patents. In that context, I have reviewed U.S. Patent Nos. 5,593,427, 5,607,454, 5,735,879, 5,749,904, and 5,749,905 which I understand to be representative of the Philips's patents involved in the present action. In particular, the feature on which I am opining is the biphasic waveform with impedance compensation.

Although Dr. Freese says that he has been asked to express his opinion on "the clinical benefits of the defibrillator features that are the subject of Philips's asserted patents," Dr. Freese never actually does that. Dr. Freese says that "the feature on which I am opining is the biphasic waveform with impedance compensation," but never actually analyzes the claims in Philips' asserted patents. Rather, Dr. Freese says that he is "opining" on "biphasic waveform with impedance compensation."

Thereafter, Dr. Freese's report, under the heading "Biphasic waveform with impedance compensation," in paragraphs 30-35, recount Dr. Freese's personal experiences:

> 30. During my medical training in the late 1990s, as a result of a purchasing process involving new ALS monitors at my affiliated EMS agency, I became aware of the use of biphasic waveform technology in both ALS monitors and AEDs. Prior to this, the defibrillators in use by my EMS agency and many organizations utilized monophasic waveforms.
>
> 31. Given the limited information provided at the time by the sales representative, I sought additional information on this technology. During my investigation, I also became aware of impedance compensation functionality. Over the course of the next two to three years, in both my role as a pre-hospital provider and as a physician in-training, I became aware of the use of these technologies in both the out-of-hospital and in-hospital settings, and I used the technology in both setting as well. As I became more experienced, I eventually began teaching the benefits of these functionalities to first responders (firefighters and police officers), EMTs, paramedics, medical students, residents, and attending physicians.

> 32. In particular, I taught how biphasic waveform technology allowed for more complete ventricular depolarization and therefore made possible greater first shock efficacy with lower defibrillating energy. This potential clinical benefit is further improved by the impedance compensation that allows for an optimized benefit-to-harm ratio for the individual patient. By that I mean that the energy likely to result in effective defibrillation is delivered, maximizing the benefit, while adjustments based upon individual patient differences reduces the likelihood of myocardial damage that may result from that energy, minimizing harm.
>
> 33. By way of background, a patient's impedance will vary depending on whether a shock is being delivered when impedance is being measured. Patient impedance measured prior to shock delivery is different than patient impedance measured after shock delivery. Accordingly, it is important that defibrillators measure impedance during shock delivery and adjust the waveform in real-time.
>
> 34. My interest in educating others about these functionalities was the direct result of an observed patient care incident in which the lack of familiarity with or knowledge of the functionality and its implications for patient treatment among treating physicians became known to me. Based on long-standing practice involving escalating defibrillating energies and previously used maximum Joules settings, it seemed that physicians and other healthcare professionals were unfamiliar with these alterations to clinical care (i.e., lower maximum energy settings for a particular device and actual delivered energy different than selected energy) with the resulting potential to distrust or not use available equipment. This experience led me to offer a series of lectures to medical providers in the early 2000s concerning the benefits of biphasic waveforms and real-time impedance compensation.
>
> 35. My experience and educational background in this area also led me to develop and introduce changes to the emergency medical dispatch (i.e., 911) protocols and pre-hospital treatment protocols at the Fire Department of New York beginning in 2004. Among those changes were the use of adult AEDs for the treatment of children in cardiac arrest and utilizing maximum energies for all defibrillatory shocks.

That is the entirety of Dr. Freese's report *vis-à-vis* the "Clinical Value of External Defibrillators" – the next paragraph in Dr. Freese's report turns to issue of patient compliance, discussed above.

Although Dr. Freese says that he has "reviewed U.S. Patent Nos. 5,593,427, 5,607,454, 5,735,879, 5,749,904, and 5,749,905," no portion of his report on the "Clinical Value of External Defibrillators" ever (1) compares any patent claims to the accused products, or (2) expresses any "opinion" regarding the scope of any patent claims, the scope of any written description, or any issues of validity or infringement.

c) ZLC's Arguments

ZLC's contention that any testimony from Dr Freese regarding the clinical value of external defibrillators should be excluded because "[t]he only 'clinical value of external defibrillators' that would be relevant to this litigation would have to be tied to the actual patents asserted here," and Dr. Freese testified at his deposition that he had not reviewed the patents-in-suit in this case when preparing his report in this case, and although he had previously reviewed patents, he could not recall which patents those were, ZLC's Freese Memo [Dkt. 455] at 5, seams to create a "strawman" form of argument.

ZLC's further contention that "[b]ecause Dr. Freese lacks knowledge of the scope of the patent claims asserted in this litigation, Dr. Freese is unqualified to testify as to any purported clinical value of those patents," *id.*, seems to further that "strawman" argument.

Namely, ZLC "seems" to be arguing that the only "relevant" testimony *vis-à-vis* the "clinical value of external defibrillators" of necessity, to be "relevant," must be "tied to the actual patents asserted here," and Dr. Freese is not qualified to testify how the "actual patents asserted here" relate to the "clinical value of external defibrillators." But testimony may be "relevant" in this case to the "clinical value of external defibrillators" without specifically "mapping" or correlating such "clinical value" to the scope of specific patent claims.

d) Conclusion

ZLC's motion, at its core, is misplaced. The test for relevancy is Rule 401, FEDERAL RULES OF EVIDENCE. And the rule governing the admissibility of relevant evidence is Rule 402. ZLC discusses neither. Rule 403 provides, again as discussed above, "[t]he court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence," but (1) under Third Circuit precedent, as discussed above, that is an issue more properly addressed by the trial court during trial or through a motion *in limine*, and, in any event, is premised on excluding "relevant evidence." Here, if ZLC's motion is understood, ZLC urges that testimony *vis-à-vis* the "clinical value of external defibrillators" of necessity, to be "relevant," must be "tied to the actual patents asserted here." But, Rule 401 is much broader than that.

Despite the headings in Dr. Freese's report, it is plain from the substance of his opinions in the body of the report, that Dr. Freese did not make any critical evaluation of the patents-in-suit, or the scope of the claims.

As an aside, Philips' argument that Dr. Freese perhaps did so earlier in 2013 in connection with the prior trial in the Massachusetts case and was perhaps excused from again reviewing the patents-in-suit here as a result of that earlier testimony, is rejected. Dr. Freese should have been fully prepared to testify during his deposition, regardless whether he had given prior testimony in 2013.

But, Dr. Freese in his report makes no effort to (1) analyze the patents-in-suit, (2) evaluate claim scope, or (3) otherwise compare the asserted claims to the prior art for purposes of validity *vel non*, or infringement *vel non*.

ZLC has made no argument *vis-à-vis* "relevancy" under Rules 401 and 402. And even if so, Rule 401 plainly is sufficiently broad to encompass Dr. Freese's proposed testimony, based on his report. With respect to Rule 403, under Third Circuit precedent, as discussed above, that is an issue more properly addressed by the trial court during trial or through a motion *in limine*.

In any event, ZLC's motion is brought solely under Rule 702, ZLC's Freese Memo [Dkt. 455] at 1, which again provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

ZLC has not shown that Dr. Freese's actual report, and the opinions therein, as outlined above, must be excluded under any of any of the provisions of Rule 702, or that Dr. Freese must be generally excluded from testifying to the "opinions" voiced in his report *vis-à-vis* the "clinical value of external defibrillators," as ZLC's motion advocates.

However, once again, that is without prejudice to a motion *in limine* seeking to exclude specific testimony.

On the other hand, Rule 26(a)(2)(B), FEDERAL RULES OF CIVIL PROCEDURE, requires:

> (i) a complete statement of all opinions the witness will express and the basis and reasons for them;
>
> (ii) the facts or data considered by the witness in forming them;
>
> (iii) any exhibits that will be used to summarize or support them;
>
> (iv) the witness's qualifications, including a list of all publications authored in the previous 10 years;
>
> (v) a list of all other cases in which, during the previous 4 years, the witness testified as an expert at trial or by deposition; and
>
> (vi) a statement of the compensation to be paid for the study and testimony in the case.

As noted above, paragraphs 30-35 of Dr. Freese's report constitute the entirety of his "opinions the witness will express and the basis and reasons for them," per Rule 26(a)(2)(B)(i), on the topic of the "Clinical Value of External Defibrillators." And all of those opinions are based on Dr. Freese's "personal experience." Namely in those paragraphs Dr. Freese does not cite any studies or reports or research that he has either done, or relied upon.

Thus, as a result, Dr. Freese's direct testimony must be limited to the "opinions" on this topic within the "four corners" of paragraphs 30-35 of Dr. Freese's report based on Dr. Freese's "personal experience."

C. Recommendation

ZLC's Motion to Exclude Testimony of Dr. John P. Freese [Dkt. 452] presents two disputes regarding Dr. Freese's proposed testimony, namely disputes regarding Dr. Freese's proposed testimony regarding (1) "patient compliance" issues, and (2) the "clinical value of external defibrillators."

1. "Patient Compliance Issues"

For the foregoing reasons, the master recommends that the Court DENY ZLC's motion *vis-à-vis* the "patient compliance" issue, without prejudice to later filing a motion *in limine*.

- In connection with any subsequent motion *in limine*, nothing said in this Report and Recommendation should be understood or interpreted as voicing any view whatsoever on (1) whether Dr. Freese may properly rely on the "WEARIT article" pursuant to

Rule 26, given his failure to cite the article in the body of his report, (2) whether ZLC suffered any prejudice during his deposition as a result of failure to cite the article in the body of his report, (3) whether the "WEARIT article" may be properly considered under Rules 703 and 705, or (4) whether the "WEARIT article" provides actual support for Dr. Freese's broader assertions.

2. "Clinical Value of External Defibrillators"

With regard to the "clinical value of external defibrillators" issue, the master recommends that the Court DENY ZLC's motion, but also to direct Philips to limit Dr. Freese's direct testimony to the "opinions" on this topic within the "four corners" of paragraphs 30-35 of Dr. Freese's report based on Dr. Freese's "personal experience."

VIII.
ZLC's Motion to Exclude Testimony of Mr. John Jarosz [Dkt. 453]

A. Brief Description of Motion and Parties' Arguments

Once again, significant portions of the parties' submissions have been redacted to remove information filed under seal.

1. Background

Under 35 U.S.C. § 284 (2011), "[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court. * * * The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances."

In general, damages for patent infringement may be based on (1) the patentee's lost profits, as explained in the seminal case, *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157 (6th Cir. 1978) (Markey, J.), or a "reasonable royalty," which has been characterized as "merely the floor below which damages shall not fall." *Bandag, Inc. v. Gerrard Tire Co.,* 704 F.2d 1578, 1583 (Fed.Cir.1983).

It does not appear that Philips is seeking "lost profits" damages, but rather is seeking "reasonable royalty" damages.

In general terms, "reasonable royalty" damages are calculated using (1) an "analytical method" that "focuses on the infringer's projections of profit for the infringing product," *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009), *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 899 (Fed.Cir.1986)(master "subtracted the infringer's usual or acceptable net profit from its anticipated net profit realized from sales of infringing device"), or (2) a method using a "hypothetical negotiation" or "willing licensor-willing licensee" methodology that attempts to ascertain a royalty that the parties would have agreed had they successfully negotiated an agreement just before infringement began. The "hypothetical negotiation" approach typically involves consideration of the non-exhaustive factors listed in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y.1970).

The Federal Circuit has explained that "estimating a reasonable royalty is not an exact science. The record may support a range of reasonable royalties, rather than a single value. Likewise, there may be more than one reliable method for estimating a reasonable royalty." *Summit 6, LLC v. Samsung Electronics Co., Ltd.*, 802 F.3d 1283, 1296 (Fed. Cir. 2015)(discussing alternative approaches). The Federal Circuit has also explained that "[a]ll approaches have certain strengths and weaknesses, and, depending upon the facts, one or all may produce admissible testimony in a particular case. Because each case presents unique circumstances and facts, it is common for parties to choose different, reliable approaches in a single case and, when they do, the relative strengths and weaknesses of each approach may be exposed at trial or attacked during cross-examination. That one approach may better account for one aspect of a royalty estimation does not make other approaches inadmissible." *Id.*

2. ZLC's Motion

Here, ZLC contends that Philips' damages expert, Mr. John Jarosz, used the "analytical method" "in part." ZLC's Jarosz Memo [Dkt. 456] at 3. Mr. Jarosz's report says that "[i]n this report, information derived from the various valuation methodologies, including the analytical method, is used in the context of the hypothetical negotiation construct to determine a reasonable royalty." Jarosz Report, Ex. 4 (sealed) to [Dkt. 456], at 57 n. 292.

ZLC moves to exclude Mr. Jarosz's report and testimony under Rule 702 and *Daubert* urging that his opinion "suffers from three fundamental defects: (1) his apportionment rate of 50% was not based on any reliable methodology; (2) his damages analysis is based on 'list prices' that ZOLL Lifecor neither received nor anticipated or projected receiving, and they overstate ZOLL Lifecor's actual

revenues by nearly half a billion dollars; and (3) he failed to consider the smallest salable patent practicing unit in his analysis." ZLC's Jarosz Motion [Dkt. 453] at 1.

In his expert report, Mr. Jarosz opines that Philips is entitled to damages of $ xxx.xx ("Total Damages") based on an alleged per unit "reasonable royalty" of $ xxx.xx ("Per Unit Royalty"). ZLC says that Mr. Jarosz based that Per Unit Royalty on the "incremental benefit" Mr. Jarosz believes ZLC received from allegedly incorporating Philips' patented technology into the accused products. According to ZLC, Mr. Jarosz calculated that "incremental benefit" by calculating the difference between a rental list price of an accused LifeVest product and a prior product that has not been accused of infringement, then multiplying that difference by what ZLC urges is an "arbitrary apportionment rate" of xx% ("Apportionment Rate"), and then multiplying that result by the average number of months an accused product is in service. ZLC's Jarosz Memo [Dkt. 456] at 1.

3. ZLC's Arguments

ZLC urges that the Apportionment Rate was not based on a reliable methodology, and that Mr. Jarosz at his deposition was unable to mathematically or quantitatively explain how he arrived at that Apportionment Rate. ZLC urges that the Apportionment Rate was "plucked out of thin air." *Id.* at 1-2. ZLC urges that "[c]ross-examination cannot cure this defect because Mr. Jarosz did not use a methodology as to which he could be cross-examined; his apportionment analysis is simply a black box. For this reason alone, his opinions are inadmissible under Fed. R. Evid. 702." *Id.* at 2.

In particular, ZLC urges that "[w]here, as here, the accused products include both patented and unpatented features, 'the patentee * * * must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative." ZLC Jarosz Memo [Dkt. 456] at 7, quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011), and citing *VirnetX, Inc. v. Cisco Sys.*, 767 F.3d 1308, 1326 (Fed. Cir. 2014)("[n]o matter what the form of the royalty, a patentee must take care to seek only those damages attributable to the infringing features."). ZLC urges that district courts must exercise their "gatekeeping" function under *Daubert* by excluding expert opinions that fail to follow the law on apportionment. ZLC Jarosz Memo [Dkt. 456] at 7, citing *VirnetX*, 767 F.3d at 1328 ("the district court should have exercised its gatekeeping authority to ensure that only theories comporting with settled principles of apportionment were allowed to reach the jury.").

ZLC urges that Mr. Jarosz presented his Apportionment Rate in a footnote to his report, without explanation, and without any quantitative basis for that Rate. ZLC points to (sealed) deposition testimony in which Mr. Jarosz was unable to write down the steps he took to quantitatively arrive at his Apportionment Rate, and during which Mr. Jarosz testified that he did not use a "formula" to arrive at that Rate.

ZLC urges that the Federal Circuit in *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51 (Fed. Cir. 2012), rejected a similarly arbitrary apportionment analysis.

With respect to the list rental prices, ZLC urges that those were prices it never anticipated receiving or actually received. *Id.* In particular, ZLC contends that Mr. Jarosz's damages opinion is faulty because he failed to apply the "analytical method" "reliably to the facts in this case, as required by Rule 702. ZLC notes that per *TVM*, the "analytical method" involves "subtract[ing] the infringer's usual or acceptable net profit from its anticipated net profit realized from sales of infringing devices." 789 F.2d at 899. ZLC contends that Mr. Jarosz failed to consider profitability in his analysis.

ZLC urges that when Mr. Jarosz compared rental prices for (1) accused products, vs. (2) non-accused products, he relied on a document that did not reflect prices that ZLC's projected, or anticipated revenue differences, or a profit analysis. ZLC cites *Hughes Tool Co. v. Dresser Indus., Inc.*, 816 F.2d 1549 (Fed. Cir. 1987), contending that Mr. Jarosz's analysis is even more flawed than in *Hughes* because Mr. Jarosz performed no profitability analysis.

With respect to the smallest salable patent practicing unit ("SSPPU"), ZLC urges that the SSPPU is no more than an automated external defibrillator (AED) using the same biphasic waveform addressed in Philips' patents. ZLC's Jarosz Memo [Dkt. 456] at 2.

In particular, ZLC urges that "[a] fundamental principle of patent damages law is that in a 'case involving multicomponent products, patentees may not calculate damages based on sales of the entire product, as opposed to the smallest salable patent-practicing unit, without showing that the demand for the entire product is attributable to the patented feature.' " ZLC's Jarosz Memo [Dkt. 456] at 17, quoting *LaserDynamics*, 694 F.3d at 67-68. ZLC says that "[t]his is because '[w]here small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product. Thus, it is generally required that royalties be based not on the entire

product, but instead on the smallest salable patent-practicing unit." *Id.* quoting *LaserDynamics*, 694 F.3d at 67.

ZLC argues that "Mr. Jarosz does not and cannot contend that the demand for the accused LifeVest is attributable to Philips's patented technology. Yet nowhere in his report does Mr. Jarosz identify or consider the SSPPU. Here, the SSPPU available commercially is at most an automated external defibrillator ('AED'). Philips contends that its own AEDs fully implement the specific biphasic waveform claimed in its patents." *Id.* at 17. ZLC contends that Philips' patents do not cover the technology that allowed external defibrillators to be "wearable." ZLC urges that "Mr. Jarosz is attempting to reward Philips for the value of ZOLL Lifecor's wearable defibrillator technology that Philips did not invent." ZLC's Jarosz Memo [Dkt. 456] at 3.

ZLC further characterizes Mr. Jarosz as a "repeat offender" noting two other courts had excluded Mr. Jarosz's opinions because he did not base his opinion on the SSPPU.

4. Philips' Response

Philips responds that "Zoll's primary attack on the analysis of Philips's expert is that he failed to specifically value the patented features in its products, but Zoll has overlooked entire portions of Mr. Jarosz's analysis. Mr. Jarosz isolated the value of the new features that were added in Zoll's new infringing product over its prior product. Mr. Jarosz then relied on Zoll's own documents lauding the patented features, testimony of Zoll's witnesses, and the opinions of experts in this case to even further focus on the value associated only with the patented features. Zoll merely disputes the value arrived at by Mr. Jarosz, but that is not surprising given that Zoll's motion does not discuss the value of the patented features to the LifeVest at all. Zoll can cross-examine Mr. Jarosz at trial, and his testimony should not be excluded merely because Zoll disagrees with him." Philips' Jarosz Opp. [Dkt. 535] at 1.

In particular, Philips urges that "[t]o create widespread use of an external biphasic defibrillator, the inventors created a smaller, lighter weight device that allowed for transportation and accommodated the variation in patient impedance. * * * Philips's patents solved the problems in the industry by providing an external defibrillator that automatically compensates for patient-to-patient impedance differences in the delivery of defibrillation. * * * This ability allows the defibrillator to be smaller, more efficient, and less expensive. * * * This biphasic waveform was also widely accepted as being more efficacious than the previous monophasic waveforms. * * *." *Id.* at 3.

Philips notes that in a study involving ZLC's earlier non-accused LifeVest product, a number of patients withdrew from the study because of "comfort or lifestyle issues," and the most frequent reason given was the size and weight of the device. *Id.* According to Philips, "not only did the study identify the size and weight of the device as a significant problem that leads to patient deaths, it also specifically identified the future biphasic waveform and its resulting size and weight reductions as a solution to the problem." *Id.* at 4.

Philips points to various sources urging that the benefits touted by ZLC's accused products are reduced size and weight. *Id.*

With respect to Mr. Jarosz's report, Philips says that he "sought to identify the benefits attributable to Zoll's infringement of Philips's patents" by noting the differences between the prior non-accused LifeVest product and the accused LifeVest product, and relied on Philips' technical expert, Dr. Wolf, for an explanation of the significance of the patents-in-suit to the therapeutic benefits and size and weight reductions. *Id.* at 6-7. Mr. Jarosz concluded that the majority of the differences between the prior non-accused product and the accused product were attributable to Philips' patented technology.

According to Philips, to apportion his analysis to only the features added in the accused LifeVest product, Mr. Jarosz made three different profitability calculations. One was based on documents showing a difference in rental rates for the prior non-accused product and the accused product. That resulted in a calculation for incremental profits per unit.

Second, according to Philips, Mr. Jarosz used data on new U.S. patients during the damages period. Mr. Jarosz then calculated a "profit premium" for the accused products.

Third, again according to Philips, Mr. Jarosz compared sales figures to compute an increase in profits from sales of the accused product over the non-accused product.

The result was a range of incremental profits for the accused product. Then, according to Philips, Mr. Jarosz cut those profits by one-half as a conservative estimate. Mr. Jarosz subsequently applied the "*Georgia-Pacific* factors" to determine a "reasonable royalty."

With respect to the issue of apportionment, Philips urges that while ZLC has relied heavily on *LaserDynamics*, according to Philips, that "decision applies to a specific exception to the Federal Circuit's damages framework that is not applicable here." Philips' Jarosz Opp. [Dkt. 535] at 10. In

particular, Philips urges that the Federal Circuit in *LaserDynamics* was addressing the "Entire Market Value Rule" ('EMVR'), and explained that "the entire market value rule allows for the recovery of damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for customer demand." 694 F.3d at 67. According to Philips, "[u]nder the entire market value rule, if the patentee can show 'that the patented feature drives the demand for an entire multi-component product,' then 'a patentee may be awarded damages as a *percentage* of revenues or profits *attributable to the entire product*.' * * * The reason that this rule is an exception is because it runs the risk of 'disclosure of the revenues earned by the accused infringer associated with a *complete product* rather than the patented component only.' " Philips' Jarosz Opp. [Dkt. 535] at 11.

Philips urges that when ZLC refers to an "apportionment rate" ZLC is attempting to analogize it to EMVR cases. Philips urges that Mr. Jarosz did not apply the EMVR or an apportionment rate because he did not apply a percentage royalty rate to the entire value of the allegedly infringing product. Rather, according to Philips, Mr. Jarosz limited his analysis to the incremental differences between the accused product and the earlier non-accused product.

Philips urges that Mr. Jarosz performed several different calculations to quantify "the value specifically associated with the incremental difference between the infringing and noninfringing products to isolate value associated with the infringing features." *Id.* at 12. Philips argues that "Mr. Jarosz then even further limited his focus by specifically identifying the portion of that incremental value that was associated with the patented features. * * * Finally, Mr. Jarosz narrowed his focus even further still by evaluating the *Georgia-Pacific* factors to identify a specific reasonable royalty tied to the patented features within that narrowed range. * * * Thus, Mr. Jarosz's analysis focused specifically on the patented features and was far removed from the 'entire market value' approach discussed in *LaserDynamics*." *Id.* at 12.

What ZLC urges was a number "picked out of thin air," Philips refers to as "Mr. Jarosz's *second* level of apportionment." *Id.* Philips urges that "the evidence shows that features of Philips's patents are significant improvements to Zoll's accused LifeVest products." *Id.*

Philips consequently urges that "[g]iven the great importance of the patented features (as discussed in Zoll's own documents), Mr. Jarosz found the asserted patents were the primary contributor of improvements in the [accused product]. * * * Since Mr. Jarosz had already apportioned

out any nonpatented features present in the older LifeVest product, it's no surprise that a higher portion of the remaining value was associated with the patented features." *Id.* at 13.

With respect to ZLC's emphasis on the fact that Mr. Jarosz was not able to arrive at a specific formula for distinguishing between patented and non-patented features, Philips urges that "such precision is not required," *id*, and "[i]ndeed, the Federal Circuit has recognized the 'difficulty that patentees may face in assigning value to a feature that may not have ever been individually sold' and as a result has 'never required absolute precision in this task; on the contrary, it is well-understood that this process may involve some degree of approximation and uncertainty.' " *Id.* at 14, quoting *VirnetX*, 767 F.3d at 1328. Philips urges that "[h]ere, Mr. Jarosz relied on the available evidence to provide a reasonable approximation of the value of the patented features. No more is required." *Id.*

With respect to ZLC's argument that Mr. Jarosz failed to properly apply the "analytical method," Philips contends that ZLC mischaracterizes Mr. Jarosz's analysis. For example, Philips urges that contrary to ZLC's argument that Mr. Jarosz failed to consider profitability, one of Mr. Jarosz's calculations compared profits from the sale of the prior non-accused LifeVest product to profits from the sale of the accused LifeVest product. Doing so, Philips says, provided a "useful data point" for determining the "incremental benefit" of the accused LifeVest product over the non-accused earlier LifeVest product.

Philips notes that ZLC's expert conceded that using actual revenues for the earlier non-accused products would not reliable, and that Mr. Jarosz, instead, used prices set by ZLC. Philips urges that to the extent ZLC disagrees with its own prior valuation, that is a an issue for cross-examination. *Id.* 17.

With respect to ZLC's argument regarding SSPPU, Philips urges that ZLC has "misapplied" Federal Circuit law. According to Philips, "where a multi-component product is '*accused of infringement*,' the Federal Circuit generally requires royalties be based on the smallest salable patent-practicing unit *of that product*." *Id.* at 18, citing *LaserDynamics*, 694 F.3d at 67. Philips notes that here ZLC appears to be arguing that the smallest salable unit in this case is an AED such as Philips's products. Philips urges that "Zoll has not (and cannot) provide a single case where the smallest salable unit is the patentee's product. Instead, the Federal Circuit's case law directs the parties to look to the smallest unit of the *accused product* that 1) practices the patent, and 2) is salable." *Id.* (emphasis by Philips).

Philips contends that the "smallest salable patent-practicing unit is the LifeVest. Zoll does not sell a smaller product that also practices the patent." Nevertheless, Philips urges, Mr. Jarosz did not use the entire value of the accused LifeVest to calculate a "reasonable royalty," but instead performed calculations intended to determine the "incremental value" of features added to the accused LifeVest product over those features of the prior non-accused LifeVest product.

According to Philips, Mr. Jarosz "then apportioned that value to further focus on only the value of the patented features." *Id.* at 19. Again, Philips notes that despite ZLC's arguments drawn to the EMVR, Mr. Jarosz did not apply the EMVR.

With respect to the cases ZLC cited in which Mr. Jarosz's opinions were excluded, Philips says that those cases involved the EMVR, which is not at issue here. *Id.* at 20.

5. ZLC's Reply

In reply, ZLC urges that "[t]he problem for Philips is that Mr. Jarosz's apportionment was not based on a reliable methodology. This is not a matter of Mr. Jarosz failing to provide a 'mathematical formula' to arrive at a 'precise valuation for each patented and nonpatented feature.' * * * Mr. Jarosz was unable to provide any quantitative explanation or support for his apportionment rate. He admitted at deposition that he could not write down each step he took to quantitatively come up with that rate, because '[t]here weren't particular steps.' " ZLC's Jarosz Reply [Dkt. 580] at 1-2.

ZLC again asserts that Mr. Jarosz's testimony is inadmissible under *LaserDynamics*. ZLC urges that the Federal Circuit's discussion of "apportionment" was in addition to the court's discussion of the EMRV. ZLC urges that Mr. Jarosz's report lacks a quantitative support *vis-à-vis* apportionment. *Id.* at 2.

ZLC also reargues that Mr. Jarosz misapplied the "analytical method," and urges that Philips misstates the law on the SSPPU. *Id.* at 3-5.

6. Philips' Sur-Reply

Philips answers in a sur-reply that Mr. Jarosz properly apportioned the patented features, Philips' Jarosz Sur-Reply [Dkt. 628] at 1, Mr. Jarosz properly relied on evidence *vis-à-vis* ZLC's pricing, *id.* at 3, and ZLC misapplied the law on SSPPU. *Id.* at 4.

B. Discussion

1. Background

As noted above, the "gatekeeping role" assigned the courts in *Daubert* "entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue." 509 U.S. at 592-93. The Supreme Court emphasized that the focus "must be solely on principles and methodology, not on the conclusions that they generate." *Id.* at 595. Factors a court may consider include: (1) "whether a theory or technique is scientific knowledge that will assist the trier of fact," (2) "whether it can be (and has been) tested," (3) "whether the theory or technique has been subjected to peer review and publication," (4) "the known or potential rate of error," and (5) whether the methodology has been generally accepted. 509 U.S. at 593-94.

However, "those factors [mentioned in *Daubert*] do not all necessarily apply even in every instance in which the reliability of scientific testimony is challenged. It might not be surprising in a particular case, for example, that a claim made by a scientific witness has never been the subject of peer review, for the particular application at issue may never previously have interested any scientist. Nor, on the other hand, does the presence of *Daubert's* general acceptance factor help show that an expert's testimony is reliable where the discipline itself lacks reliability, as, for example, do theories grounded in any so-called generally accepted principles of astrology or necromancy." *Kumho*, 526 U.S. at 151.

As also noted above, following *Daubert*, Rule 702, FEDERAL RULES OF EVIDENCE, was revised to provide:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

(2011 revisions). The Committee Notes on Rules – 2000 Amendment explain, *inter alia*, that "the proponent has the burden of establishing that the pertinent admissibility requirements are met by a preponderance of the evidence." FED. R. EVID. 702 (Committee Notes on Rules – 2000 Amendment).

The Federal Circuit has explained that "[u]nder these rules, a district court may exclude evidence that is based upon unreliable principles or methods, legally insufficient facts and data, or where the reasoning or methodology is not sufficiently tied to the facts of the case. * * * But the question of whether the expert is credible or the opinion is correct is generally a question for the fact finder, not the court. * * * Indeed, '[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.' " *Summit 6,* 802 F.3d at 1295-96.

For example, the Federal Circuit has explained, in connection with determining a reasonable royalty, that "[t]his court has recognized that estimating a reasonable royalty is not an exact science. The record may support a range of reasonable royalties, rather than a single value. Likewise, there may be more than one reliable method for estimating a reasonable royalty," *id.* at 1296, and "[a] party may use the royalty rate from sufficiently comparable licenses, value the infringed features based upon comparable features in the marketplace, or value the infringed features by comparing the accused product to non-infringing alternatives. * * * A party may also use what this court has referred to as 'the analytical method,' focusing on the infringer's projections of profit for the infringing product." *Id.*

Overall, the Federal Circuit has advised that *vis-à-vis* determining a reasonable royalty:

> All approaches have certain strengths and weaknesses, and, depending upon the facts, one or all may produce admissible testimony in a particular case. Because each case presents unique circumstances and facts, it is common for parties to choose different, reliable approaches in a single case and, when they do, the relative strengths and weaknesses of each approach may be exposed at trial or attacked during cross-examination. That one approach may better account for one aspect of a royalty estimation does not make other approaches inadmissible.
>
> In sum, while all approximations involve some degree of uncertainty, the admissibility inquiry centers on whether the methodology employed is reliable. * * *. A distinct but integral part of that inquiry is whether the data utilized in the methodology is sufficiently tied to the facts of the case. * * * Hence, a reasonable or scientifically valid methodology is nonetheless unreliable where the data used is not sufficiently tied to the facts of the case. * * * Likewise, ideal input data cannot save a methodology that is plagued by logical deficiencies or is otherwise unreasonable. * * * But where the methodology is reasonable

> and its data or evidence are sufficiently tied to the facts of the case, the gatekeeping role of the court is satisfied, and the inquiry on the correctness of the methodology and of the results produced thereunder belongs to the fact-finder.

Summit 6, 802 F.3d at 1296.

As further noted above, ZLC urges that Mr. Jarosz's opinion "suffers from three fundamental defects: (1) his apportionment rate of 50% was not based on any reliable methodology; (2) his damages analysis is based on 'list prices' that ZOLL Lifecor neither received nor anticipated or projected receiving, and they overstate ZOLL Lifecor's actual revenues by nearly half a billion dollars; and (3) he failed to consider the smallest salable patent practicing unit in his analysis." ZLC's Jarosz Motion [Dkt. 453] at 1. Those will be addressed in that order.

2. Apportionment Rule

a) Apportionment v. Entire Market Value

The rule that damages in a patent infringement case must be apportioned between the patented and unpatented features appropriated by an infringing product has long been a requirement. *See Garretson v. Clark*, 111 U.S. 120 (1884). *Garretson* involved an improvement in a clamp for securing a mop-head to a mop handle. Here the patented feature was the clamp. The patentee claimed as damages the difference between his sales price and his cost for the entire mop. That measure of damages was rejected. The Supreme Court explained that "[w]hen a patent is for an improvement, and not for an entirely new machine or contrivance, the patentee must show in what particulars his improvement has added to the usefulness of the machine or contrivance. He must separate its results distinctly from those of the other parts, so that the benefits derived from it may be distinctly seen and appreciated." 111 U.S. at 121. Or, a patentee may assert a right to receive damages based on the "whole machine," but then must show that "the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature." *Id.*

In terms of § 284, "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer," such apportionment is required to determine what a "reasonable royalty" would have been "for the use of the invention by the infringer."

The Federal Circuit has explained that "[a]s a substantive matter, it is the 'value of what was taken' that measures a 'reasonable royalty' under 35 U.S.C. § 284. * * * What is taken from the owner

of a utility patent (for purposes of assessing damages under § 284) is only the patented technology, and so the value to be measured is only the value of the infringing features of an accused product." *Ericsson, Inc. v. D-Link Systems, Inc.*, 775 F.3d 1201, 1226 (Fed. Cir. 2014), quoting *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 648 (1915)(finding insufficient data to justify lost sales damages, but adding that "[s]o, had the plaintiff pursued a course of granting licenses to others to deal in articles embodying the invention, the established royalty could have been proved as indicative of the value of what was taken, and therefore as affording a basis for measuring the damages. * * * But, as the patent had been kept a close monopoly, there was no established royalty. In that situation it was permissible to show the value by proving what would have been a reasonable royalty, considering the nature of the invention, its utility and advantages, and the extent of the use involved. Not improbably such proof was more difficult to produce, but it was quite as admissible as that of an established royalty.").

In *Ericsson*, the Federal Circuit further explained that "[l]ogically, an economist could do this [apportionment between the value of patented technology versus non-patented technology] in various ways—by careful selection of the royalty base to reflect the value added by the patented feature, where that differentiation is possible; by adjustment of the royalty rate so as to discount the value of a product's non-patented features; or by a combination thereof. The essential requirement is that the ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product." 773 F.3d at 1226.

Thus, "apportionment" between the value of patented versus non-patented technology could permissibly occur by (1) selection of a royalty base that reflects "the value added by the patented feature," or (2) adjusting the royalty rate "so as to discount the value of a product's non-patented features," or (3) "a combination thereof." Regardless of the methodology, the "essential requirement" is that ultimate reasonable royalty "must be based on the incremental value that the patented invention adds to the end product." (emphasis added)

b) Related Evidentiary Rule

However, as the Federal Circuit further explained in *Ericsson*, the Federal Circuit has adopted an additional "evidentiary principle" to avoid misleading a jury ("The point of the evidentiary principle is to help our jury system reliably implement the substantive statutory requirement of apportionment of royalty damages to the invention's value." 773 F.3d at 1226).

Specifically, the Federal Circuit explained that "[t]he principle, applicable specifically to the choice of a royalty base, is that, where a multi-component product is at issue and the patented feature is not the item which imbues the combination of the other features with value, care must be taken to avoid misleading the jury by placing undue emphasis on the value of the entire product." 773 F.3d at 1226.

In other words, a jury may be misled if it is presented with evidence or testimony of very large numbers under a "reasonable royalty" analysis based on the "entire market value rule" (EMVR), and then some arbitrary value is chosen as the royalty rate. In essence, doing so potentially opens the door to a jury argument that the "market value" of the "entire" product commercialized is some large number (for example $ 500 million), and thus a small percentage as an arbitrary small royalty rate (say 5% equating to $ 25 million) must therefore be "reasonable." In that instance, the royalty rate is not truly grounded in what a royalty rate "should be," but rather is an arbitrary royalty rate hopefully perceived as "reasonable" simply because it is a small percentage of a much larger royalty base.

First, although, as noted above, the Supreme Court's opinion in *Garretson* permits, in an appropriate case, damages to be based on "the entire value of the whole machine, as a marketable article," that is only permissible when "the entire value of the whole machine" is "properly and legally attributable to the patented feature." 111 U.S. at 121.

In *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed.Cir.1995), the Federal Circuit, in an extensive discussion of the EMVR, noted, *inter alia*, that "[w]e have held that the entire market value rule permits recovery of damages based on the value of a patentee's entire apparatus containing several features when the patent-related feature is the 'basis for customer demand.' " 56 F.3d at 1549. If not, then the "entire market value" is not an appropriate starting place.

In *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011), the Federal Circuit held that "[t]his rule [the EMVR] is derived from Supreme Court precedent requiring that 'the patentee * * * must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative,' or show that 'the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature.' " 632 F.3d at 1318, quoting *Garretson*, 111 U.S. at 121. *See also*, *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336-37 (Fed. Cir. 2009)("In one sense, our law on the entire market value rule is quite

clear. For the entire market value rule to apply, the patentee must prove that 'the patent-related feature is the "basis for customer demand," ' " quoting *Rite-Hite*, 56 F.3d at 1549, but adding that "the objective of the Court's concern [in *Garretson*, and *Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co.*, 225 U.S. 604, 614-15 (1912)] has been two-fold: determining the correct (or at least approximately correct) value of the patented invention, when it is but one part or feature among many, and ascertaining what the parties would have agreed to in the context of a patent license negotiation. Litigants must realize that the two objectives do not always meet at the same precise number. Furthermore, licensors of patented technology often license an invention for more or less than its true 'economic value.' Such is the inherent risk in licensing intangible assets that may have no established market value.").

In *Uniloc*, Uniloc's patent-in-suit was drawn to a software registration system that was intended to combat improper copying of software through a system using information such as a serial number. Uniloc urged that Microsoft's "Product Activation" feature in its Word XP, Word 2003, and Windows XP software infringed.

The jury had awarded Uniloc $ 388 million in "reasonable royalty" damages based on testimony by Dr. Gemini, Uniloc's damages expert, that the damages should have been almost $ 565 million based on a hypothetical negotiation between Uniloc and Microsoft and the *Georgia-Pacific* factors. 632 F.3d at 1311. An internal Microsoft document stated that a "Product Key" was "worth anywhere between $10 and $10,000 depending on usage." Dr. Gemini took the lowest value, $ 10, applied the now discredited "25 percent rule of thumb"[3] and arrived at a royalty rate of $ 2.50 per software license issued. Dr. Gemini considered the *Georgia-Pacific* factors, but concluded that those factors did not affect the $ 2.50 rate. Dr. Gemini multiplied the $ 2.50 royalty rate by the number of new licenses for Office and Windows products to arrive at a projected "reasonable royalty" of almost $ 565 million.

Dr. Gemini then performed a "check" by "estimating the gross revenues for the accused products" by multiplying the 225,978,721 of new licenses for Office and Windows by the average sales

[3] As explained in the Federal Circuit's opinion, the "25 percent rule of thumb" originated in a publication as a tool to approximate the reasonable royalty rate that a manufacturer of a patented product would be willing to pay a patentee during a hypothetical negotiation for a license. As discussed further in connection with the *Uniloc* opinion, the Federal Circuit squarely rejected that "rule of thumb." 632 F.3d at 1315.

price per license of $85. That resulted in a gross revenue value of $ 19.28 billion. Dr. Gemini then calculated that his proposed damages of $ 565 million resulted in a royalty rate, based on gross revenues, of 2.9%.

Dr. Gemini presented that information in a pie chart with testimony that "in my experience, and data I've seen as far as industry royalty rates for software, which are generally above—on average, above 10% or 10, 11%, I felt that this royalty was reasonable and well within that range." 632 F.3d at 1312.

The Federal Circuit first totally rejected the "25 percent rule of thumb" announcing that "[t]his court now holds as a matter of Federal Circuit law that the 25 percent rule of thumb is a fundamentally flawed tool for determining a baseline royalty rate in a hypothetical negotiation. Evidence relying on the 25 percent rule of thumb is thus inadmissible under *Daubert* and the Federal Rules of Evidence, because it fails to tie a reasonable royalty base to the facts of the case at issue." 632 F.3d at 1315.

The Federal Circuit secondly held that Uniloc's use of a $ 19 billion "check" was improper under the EMVR, for several reasons, one of which was that "[t]he Supreme Court and this court's precedents do not allow consideration of the entire market value of accused products for minor patent improvements simply by asserting a low enough royalty rate." 632 F.3d at 1320. The Federal Circuit explained that:

> This case provides a good example of the danger of admitting consideration of the entire market value of the accused where the patented component does not create the basis for customer demand. As the district court aptly noted, "[t]he $19 billion cat was never put back into the bag even by Microsoft's cross-examination of Mr. Gemini and re-direct of Mr. Napper, and in spite of a final instruction that the jury may not award damages based on Microsoft's entire revenue from all the accused products in the case." * * * This is unsurprising. The disclosure that a company has made $19 billion dollars in revenue from an infringing product cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue. Uniloc exacerbated the situation in colloquies like the following on cross-examination of Microsoft's damages expert, in which it implied a relationship between the entire market value of the accused products and the patent:
>
> * * * * * * *
>
> This is in clear derogation of the entire market value rule, because the entire market value of the accused products has not been shown to be derived from the patented contribution.

632 F.3d at 1320-21.

In *LaserDynamics*, the patented technology enabled an optical disc drive (ODD) to identify the type of optical disk (CD or DVD) that had been inserted. The Federal Circuit reiterated that "[w]here small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product. Thus, it is generally required that royalties be based not on the entire product, but instead on the 'smallest salable patent-practicing unit.' " 694 F.3d at 67.

The Federal Circuit also reiterated that "[t]he entire market value rule is a narrow exception to this general rule. If it can be shown that the patented feature drives the demand for an entire multi-component product, a patentee may be awarded damages as a percentage of revenues or profits attributable to the entire product." 694 F.3d at 67, citing *Rite-Hite*, 56 F.3d at 1549, 1551. The Federal Circuit added that "the requirement to prove that the patented feature drives demand for the entire product may not be avoided by the use of a very small royalty rate. We recently rejected such a contention, raised again in this case by LaserDynamics, and clarified that '[t]he Supreme Court and this court's precedents do not allow consideration of the entire market value of accused products for minor patent improvements simply by asserting a low enough royalty rate.' " 694 F.3d at 67, quoting *Uniloc*, 632 F.3d at 1319-20.

The Federal Circuit in *LaserDynamics* further reiterated that "in any case involving multi-component products, patentees may not calculate damages based on sales of the entire product, as opposed to the smallest salable patent-practicing unit, without showing that the demand for the entire product is attributable to the patented feature." 694 F.3d at 67-68.

The Federal Circuit additionally reiterated the "rule" from *Uniloc* that "[a]dmission of such overall revenues [entire market value], which have no demonstrated correlation to the value of the patented feature alone, only serve to make a patentee's proffered damages amount appear modest by comparison, and to artificially inflate the jury's damages calculation beyond that which is 'adequate to compensate for the infringement.' " 694 F.3d at 68.

In a first trial in *LaserDynamics*, LaserDynamics' expert, Mr. Murtha, opined that a 2% royalty rate applied to total revenues from the sales of laptop computers in the United States – $ 2.53 billion – was a reasonable royalty. The Federal Circuit concluded that "LaserDynamics' use of the entire market value rule was impermissible, however, because LaserDynamics failed to present evidence showing that the patented disc discrimination method drove demand for the laptop computers." 694

F.3d at 68. The Federal Circuit added that "[i]t is not enough to merely show that the disc discrimination method is viewed as valuable, important, or even essential to the use of the laptop computer. Nor is it enough to show that a laptop computer without an ODD practicing the disc discrimination method would be commercially unviable." *Id.*

With respect to the royalty rate of 2%, Mr. Murtha first reasoned that because the defendant, QCI, sold laptop computers and not ODDs, the complete laptop computer was an appropriate royalty base. Second, Mr. Murtha concluded that 6% would be a reasonable royalty rate with respect to an ODD alone by (1) relying on comparable rates in two licensing programs involving DVDs, one of which resulting in a royalty rate of 3.5% and the other resulting in a 4% rate, (2) a royalty survey conducted by the Licensing Executive Society, but which was not specific to ODDs or any particular industry, which suggested a 2-5% royalty rate range for a "minor improvement," a 4-8% range for a "major improvement," and a 6-15% range for a "major improvement." 694 F.3d at 60-61.

Thus, Mr. Murtha arrived at a 6% royalty rate for ODDs alone based on studies have little or no relation to actual licensing of ODD technology. Because QCI only sold complete laptops, with total sales of $ 2.53 billion in the United States, Mr. Murtha consulted with LaserDynamics' other experts and concluded that the patented ODD technology was responsible for one-third of the value of a laptop computer containing an ODD. He arrived at a 2% royalty rate by taking one-third of the 6% royalty rate. He then applied that 2% rate to the entire $ 2.53 billion in overall sales to arrive at $ 52.1 million, which was the figure presented to the jury. 694 F.3d at 61.

The jury in the first trial returned a verdict of $ 52 million in damages. QCI filed a motion for a remittitur or a new trial, which the district court granted, finding that LaserDynamics had improperly relied on the EMVR. LaserDynamics refused to accept a remittitur to $ 6.2 million, and elected to have a new trial. One of the issues on appeal was whether the district court had erred in granting that new trial.

The Federal Circuit concluded that the district court had not erred concluding, as noted above, that LaserDynamics had improperly relied on the EMVR in creating a royalty base consisting of the overall sales of laptops containing ODDs.

The Federal Circuit added that "[f]urthermore, Mr. Murtha's one-third apportionment to bring his royalty rate down from 6% per ODD to 2% per laptop computer appears to have been plucked out of thin air based on vague qualitative notions of the relative importance of the ODD technology."

694 F.3d at 69. The Federal Circuit equated that to the "25% Rule" that the Federal Circuit had rejected in *Uniloc*. *Id.*

The Federal Circuit also rejected LaserDynamics' argument that "practical and economic necessity compelled" use of the entire laptop computer as the royalty base, noting that in a hypothetical negotiation for a "reasonable royalty," the parties could have agreed on a lump sum royalty. The Federal Circuit also viewed that argument as failing "to address the fundamental concern of the entire market value rule, since permitting LaserDynamics to use a laptop computer royalty base does not ensure that the royalty rate applied thereto does not overreach and encompass components not covered by the patent. That is, if difficulty in precisely identifying the value of the ODDs is what justifies using complete laptop computers as the royalty base, when it comes time to then apportion a royalty rate that accounts for the ODD contribution only, the exceedingly difficult and error-prone task of discerning the ODD's value relative to all other components in the laptop remains." 694 F.3d at 70.

3. Jarosz Report

Here, once again, Mr. Jarosz's report is sealed. Thus, the following discussion is at a high level to avoid disclosing any truly confidential information.

a) Overview

Mr. Jarosz first provides an "Introduction" addressing, *inter alia*, his experience *etc.* Jarosz Report at 1-3. ZLC has not criticized any part of that portion of the report.

Mr. Jarosz then provides a "Background" section discussing the parties, related litigation, SCA treatment options, including defibrillators and "wearable devices," the technology, accused infringement, including ZLC's product development, accused products, product distribution, product success, and patents-in-suit. Jarosz Report at 3-52. ZLC has similarly not criticized that portion of the report.

In a section entitled "III. DAMAGES FRAMEWORK," Mr. Jarosz begins with § 284, and continues with a heavily footnoted discussion of the types of recoverable damages. Jarosz Report at 52-53. Once again, ZLC has not criticized that portion of the report.

Beginning on page 53, the Jarosz report, under the heading "IV REASONABLE ROYALTY DAMAGES," continues, again in a heavily footnoted section, to discuss "Legal Framework," "Hypothetical Negotiation Construct," and "Reasonable Royalty Analysis." Jarosz Report at 53-101.

Lastly, the Jarosz report discusses prejudgment interest and a conclusion. Jarosz Report at 101-102. ZLC has not specifically commented on this portion of the report, other than the conclusion.

b) Reasonable Royalty Damages

(1) Framework

Under the section "IV REASONABLE ROYALTY DAMAGES," and the subheading "Legal Framework," Mr. Jarosz discusses *Georgia-Pacific* and the *Georgia-Pacific* factors, Report at 54-55, and then turns to the "B. Hypothetical Negotiation Construct," with an "1. Overview" saying that "[o]ne of the most common tools used in reasonable royalty analyses is the 'hypothetical negotiation' construct, which frames the analysis using a hypothetical arm's-length negotiation for a license to practice the patent(s)-in-suit between a willing patent owner and a willing potential licensee at the point of first alleged infringement." Jarosz Report at 55-57. Mr. Jarosz says that "[t]his construct is reflected in *Georgia-Pacific* Factor 15," *id.* at 57, which Mr. Jarosz earlier quoted as:

> The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee – who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention – would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

Jarosz Report at 55-56, quoting *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified and aff'd*, 446 F.2d 295 (2d Cir. 1971).

As noted above, in general terms, "reasonable royalty" damages are calculated using (1) an "analytical method" that "focuses on the infringer's projections of profit for the infringing product," *Lucent*, 580 F.3d at 1324, or (2) a method using the "hypothetical negotiation" or "willing licensor-willing licensee" methodology that attempts to ascertain a royalty that the parties would have agreed had they successfully negotiated an agreement just before infringement began, namely *Georgia-Pacific* Factor 15.

In footnote 292, Mr. Jarosz states, in part:

> In *Lucent*, the Federal Circuit suggested that the hypothetical negotiation construct was an alternative to "the analytical method" (which focuses on the allocation of an infringer's profits attributable to the accused products) in the assessment of reasonable royalty damages. *See*, *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324-25 (Fed. Cir. 2009). In this report, information derived from the various valuation methodologies, including the analytical method, is used in the context of the hypothetical negotiation construct to determine a reasonable royalty.

Jarosz Report at 57 n. 292. As also noted above, the Federal Circuit has explained that "estimating a reasonable royalty is not an exact science. The record may support a range of reasonable royalties, rather than a single value. Likewise, there may be more than one reliable method for estimating a reasonable royalty." *Summit 6,* 802 F.3d at 1296 (discussing alternative approaches). And has also observed that "[a]ll approaches have certain strengths and weaknesses, and, depending upon the facts, one or all may produce admissible testimony in a particular case. Because each case presents unique circumstances and facts, it is common for parties to choose different, reliable approaches in a single case and, when they do, the relative strengths and weaknesses of each approach may be exposed at trial or attacked during cross-examination. That one approach may better account for one aspect of a royalty estimation does not make other approaches inadmissible." *Id.*

Here, it appears – as discussed further below – that Mr. Jarosz has used, as he says, "information derived from the various valuation methodologies, including the analytical method" in analyzing the "hypothetical negotiation construct to determine a reasonable royalty."

As noted above, ZLC challenges Mr. Jarosz's report on the basis that (1) his apportionment rate was not based on any reliable methodology; (2) his damages analysis was based on "list prices" that ZLC neither received nor anticipated or projected receiving, and that overstate ZLC's actual revenues; and (3) he failed to consider the smallest salable patent practicing unit in his analysis. It is unclear whether ZLC expressly challenges Mr. Jarosz's use of "information derived from the various valuation methodologies, including the analytical method" in analyzing the "hypothetical negotiation construct to determine a reasonable royalty." After all, both the Supreme Court and the Federal Circuit have expressed a "flexible" approach to analyzing "reasonable royalties" royalty damages, especially based on "admissible testimony in a particular case."

Mr. Jarosz has asserted the "hypothetical negotiation would have occurred no later than late 2002/early 2003." Jarosz Report at 59. ZLC had not challenged that assertion.

According to the Jarosz report, around the time of the hypothetical negotiation, ZLC made market projections related to the accused products. Jarosz Report at 60.

(2) Quantitative Analysis

Under the heading "C. Reasonable Royalty Analysis" and the subheading "1. Quantitative Analysis," Mr. Jarosz says that he assessed reasonable royalty damages using three methodologies: (1) Incremental Benefit (or Income) Approach, (2) Licensing Comparables (or Market) Approach, and (3) Design-Around (or Cost Approach. *Id.* A footnote contains references to what are presumed to be supporting books/articles. *Id.* n. 304.

(a) Incremental Benefit Approach

The Incremental Benefit Approach is discussed at pages 61-73. According to Mr. Jarosz, "[a]n Incremental Benefit analysis seeks to identify the gains enjoyed by the infringer attributable to use of the patent. In particular, it calls for an evaluation of the benefits of practicing the patent versus the benefits of practicing the non-infringing, next-best alternative. Those benefits may be in the form of increased prices, volumes, or profits." Jarosz Report at 61.

According to the Report, that analysis for "products that are comprised of multiple complementary technologies and drivers of value" involves two "building blocks." The first "building block" determines the incremental benefits associated with the use of the patented technology. That, according to the Report, establishes an upper bound for a reasonable royalty because that includes contributions by both patented and non-patented technology as well as "business acumen." The second "building block," according to the Report, determines the portion of the benefits that are attributable to the patented technology "(this part of the analysis is often referred to as apportionment)." The Report says that "[t]he objective of this step of the analysis is to isolate, to the extent possible, the specific contribution of the patent-in-suit, as distinct from the contributions of other patented and non-patented technologies or considerations." Jarosz Report at 61.

(i) Benefits Associated With Alleged Infringement

In order to determine the first "building block," under the heading "(1) Benefits Associated with the Alleged Infringement," Mr. Jarosz, referring to a ZLC financial statement, reported the LifeVest revenues worldwide for a time period, and also the gross profits and operating profits associated with those revenues. Mr. Jarosz determined that those revenues and profits were principally

generated with a particular type of commercial activity. Mr. Jarosz then determined U.S. revenues for a time period. *Id.* at 62-63.

(ii) Benefits Attributable to Alleged Infringement

In order to determine the second "building block," under the heading "(2) Benefits Attributable to the Alleged Infringement," Mr. Jarosz compared the "profitability" of the accused products to that of non-accused products. Mr. Jarosz referred to a ZLC document listing three attribute/feature differences between the accused and non-accused products. Citing a conversation with Dr. Wolf, Philips' technical expert (an issue discussed further below in connection with ZLC's motion to exclude certain testimony by Dr. Wolf), Mr. Jarosz reported that it was his understanding that the technology of the patents-in-suit was primarily responsible for two of the three listed differences. Jarosz Report at 64.

Mr. Jarosz also referred to a letter from ZLC to a governmental agency that listed four improvements in the accused product over the prior non-accused product. Again, citing a conversation with Dr. Wolf, as well as a deposition of a ZLC employee, Mr. Jarosz expressed his understanding that the technology of the patents-in-suit was primarily responsible for two of the four listed improvements. Mr. Jarosz, again citing a conversation with Dr. Wolf, also identified other features of the accused products that resulted from the patented technology. Jarosz Report at 64-65.

Citing ZLC documents and certain deposition testimony, Mr. Jarosz calculated a range for higher "list prices" for the accused products over the non-accused products. Mr. Jarosz calculated a reduced cost of goods associated with three components which Mr. Jarosz associated with use of the patented technology. Jarosz Report at 65-66.

Mr. Jarosz then calculated the difference in profitability between the accused and non-accused products by using the aforementioned difference in "list prices" between the accused and non-accused products, on the assumption that the costs for both products would be the same. Mr. Jarosz then calculated a time period associated with each new patient in determining a "profit" generated by the accused products per new patient. Mr. Jarosz then applied that "profit" figure to the estimated number of new U.S. patients for time period. The end result was an asserted "incremental profits per unit" of the accused products over the non-accused product. Jarosz Report at 66-67.

In a second calculation, Mr. Jarosz used ZLC data for new U.S. patients. That resulted in a different lower figure for asserted "incremental profits per unit." Jarosz Report at 67-68.

In a third calculation, Mr. Jarosz compared the "profit" on the non-accused product with the "profit" on the accused product using commercial activity other than "list prices." Jarosz Report at 68.

(3) Apportionment?

(a) Mr. Jarosz's Methodology

At this point in the analysis, Philips contends that Mr. Jarosz "had already apportioned out any nonpatented features present in the older LifeVest product." Philips' Jarosz Opp. [Dkt. 535] at 13. Philips says, for example, that "[i]n addition to the patented features, Mr. Jarosz also considered the nonpatented features added to the WCD 3000. Indeed, his report specifically refers to nonpatented features highlighted in certain documents." *Id.* at 12.

As discussed above, it is true that Mr. Jarosz did discuss (1) three attribute/feature differences between the prior non-accused product and the accused product, and, based on a discussion with Dr. Wolf, expressed his understanding that the technology of the patents-in-suit was "primarily responsible" for two of those three attribute/feature differences," and (2) four improvements in the accused product over the non-accused product, and, again based on a discussion with Dr. Wolf, expressed his understanding that the technology of the patents-in-suit was "primarily responsible" for two of those four improvements, as well as his understanding that "almost every component related to the shock delivery" had physical and economic benefits resulting from the patented technology. Jarosz Report at 64-65.

However, when Mr. Jarosz turned to "pricing," Mr. Jarosz used a difference in "list prices" between the accused product and the non-accused product. *Id.* at 65. Those "list prices" were for the use of the entire LifeVest – including all of the "attribute/feature differences" and "improvements," not just those attributed to the technology of the patents-in-suit. Jarosz Report at 65. In other words, although it is true that Mr. Jarosz previously discussed his understanding of which of the "attribute/feature differences" and "improvements" could be traced to the alleged use of the patented technology, *i.e.*, the infringement, Mr. Jarosz's calculation of a difference in "list prices" between the

accused product and the non-accused product makes no readily discernable distinction between patented and unpatented technology.

Mr. Jarosz also asserts a reduction in the cost of producing the accused product that he understands is attributable to the patented technology, Jarosz Report at 66, but subsequently does not use that asserted reduction in actually calculating a difference in "profitability" between the prior non-accused product and the accused product. Jarosz Report at 66 ("assuming that the costs associated with both products were/are the same"). Although that is actually to ZLC's benefit, in a footnote Mr. Jarosz says that, as a result, "my calculation here likely underestimates the incremental profits attributable to the alleged infringement." Jarosz Report at 66 n. 327. That potentially runs the risk of misleading a jury – namely, an argument that the profitability calculations are "reasonable" because the calculated "profits" would be higher if the alleged cost reduction had been included – an argument akin to that discussed in *LaserDynamics*.

Thus, as a first point, to the extent that Mr. Jarosz's report and subsequent testimony is admitted, the master recommends that the discussion of an alleged reduction in the cost of producing the accused products be excluded. That alleged reduction in cost is not used in Mr. Jarosz's subsequent calculations, appears to have been included only to bolster the "reasonableness" of his approach, and runs the risk of misleading a jury.

When Mr. Jarosz then turns to calculating "the difference in profitability" between the accused and non-accused products under the heading "a) Profit Difference" he begins with the previously calculated difference in "list prices" between the accused product and the non-accused product, albeit at the lower end of the previously calculated range. Jarosz Report at 66.

Again, at this stage in the calculations, Mr. Jarosz has discussed that both patented and non-patented technology are incorporated in the accused products, but has made no attempt to distinguish the value of the patented versus non-patented technology. When Mr. Jarosz says that he was determining the "incremental benefits attributable to the alleged infringement," Jarosz Report at 63, the net result was a calculated difference in "list prices" between the accused product and the non-accused product. And that difference assumes that the entirety of that difference is attributable to the infringement.

Philips, as noted above, urges that "Zoll repeatedly criticizes Mr. Jarosz for not providing a mathematical formula that arrives at a precise valuation for each patented and nonpatented feature,

but such precision is not required. Indeed, the Federal Circuit has recognized the 'difficulty that patentees may face in assigning value to a feature that may not have ever been individually sold' and as a result has 'never required absolute precision in this task; on the contrary, it is well-understood that this process may involve some degree of approximation and uncertainty.' " Philips' Jarosz Opp. [Dkt. 535] at 13-14, quoting *VirnetX*, 767 F.3d at 1328. Philips urges that "[h]ere, Mr. Jarosz relied on the available evidence to provide a reasonable approximation of the value of the patented features. No more is required." *Id.* at 14.

Yes, it is true that the Federal Circuit is "cognizant of the difficulty that patentees may face in assigning value to a feature that may not have ever been individually sold," and has "never required absolute precision in this task; on the contrary, it is well-understood that this process may involve some degree of approximation and uncertainty," but the Federal Circuit has also held that "[w]here the smallest salable unit is, in fact, a multi-component product containing several non-infringing features with no relation to the patented feature (as VirnetX claims it was here), the patentee must do more to estimate what portion of the value of that product is attributable to the patented technology. To hold otherwise would permit the entire market value exception to swallow the rule of apportionment." *VirnetX*, 767 F.3d at 1327-28.

Mr. Jarosz, in his report, frequently refers to the patented technology as being "primarily responsible" for the benefits realized by the accused product over the prior non-accused product. *See e.g.,* Jarosz Report at 64. And perhaps that is true. And perhaps a case could be made that the "entire value" of the accused product here is "properly and legally attributable" to the patented technology, per *Garretson*, 111 U.S. at 121, or that the patented technology "was of such paramount importance that it substantially created the value of the component parts," *Marconi Wireless Telegraph Co. v. United States*, 53 USPQ 246, 250 (Ct.Cl. 1942), *aff'd in part and vacated in part*, 320 U.S. 1 (1943), or that the patented technology was the "basis for customer demand," *State Industries, Inc. v. Mor-Flo Industries, Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989), or otherwise satisfies the requirements for the EMVR per *Rite-Hite*. But Mr. Jarosz, while asserting his understanding that the patented technology is "primarily responsible" for the benefits of the accused product, shies away from asserting the EMVR.

(b) Conclusion

Bottom line, Mr. Jarosz cannot have it both ways. The accused product plainly is a multi-component product containing both allegedly infringing and non-infringing features. Mr. Jarosz

appears, on the one hand, to point to the importance of the patented technology in achieving the benefits of the accused product, but without owning up to the rigors of showing entitlement to damages based on the "market value" of the entire product, while, on the other hand, purporting to distinguish between patented and non-patented "attribute/feature differences" and "improvements" – but without actually doing so.

Returning the Jarosz report, the "list price" difference between the accused and non-accused products (which does not account for any valuation distinction between patented and unpatented technology) is then used to compute a "profit difference" value for each new patient. Jarosz Report at 66. That figure as well thus contains no valuation distinction between patented and unpatented technology.

Mr. Jarosz then uses that figure in two separate but related calculations to arrive at "incremental profits per unit." The first uses Mr. Jarosz's "estimate of the number of new patients." Jarosz. Jarosz Report at 66-67. The second uses ZLC's data on the number of new patients. *Id.* at 67. The result is two "incremental profits per unit" numbers, neither of which discriminate between the value of patented versus non-patented technology. *Id.* at 67-68.

Mr. Jarosz then runs a third calculation based on a different commercial activity, and arrives at a third "incremental profits per unit" number. *Id.* at 68. That number too fails to discriminate between the value of patented versus non-patented technology.

It would seem that the inescapable conclusion is that Mr. Jarosz's methodology up to this point in the analysis does not truly apportion asserted damages between patented and non-patented technology.

(4) Mr. Jarosz Apportionment Methodology and Apportionment Rate

(a) Methodology

The next section in Mr. Jarosz's report is entitled "b) Apportionment." Although, once again, Philips argues that "apportionment" had already been done at this stage, for the foregoing reasons, that is plainly not the case. Mr. Jarosz says here that "[f]or the purposes of determining reasonable royalty damages based on the calculations above, it is important to determine the portion of these additional profits that are attributable to the alleged infringement – i.e., due to the patented inventions." Jarosz Report at 68.

Mr. Jarosz says that, "[b]ased on the information I have reviewed, it appears that a significant portion of these incremental profits may be attributable to the alleged infringement * * *." *Id.* at 68. Again, the "incremental profits" are discussed above. Contrary to Philips' argument that those "incremental profits" inherently contained an apportionment, here Mr. Jarosz's report plainly states the contrary.

Mr. Jarosz says that the patented technology (1) "contributed substantially" to higher profits, and (2) "were, in large part, driven by the improvements." *Id.* at 68. Mr. Jarosz then discusses the "importance of the patents-at-issue," referencing various depositions and other materials. *Id.* at 69-73. Mr. Jarosz subsequently concludes that "[b]ased on the documents and testimony in this case, it appears that the patents-in-suit are a significant driver of the value to the accused Lifecor system." *Id.* at 73. Mr. Jarosz says that "[l]ikewise, the patents-in-suit are the primary contributor of improvements" to the accused products, citing a conversation with Dr. Wolf. *Id.* Mr. Jarosz opines that "[t]he patents-in-suit appear to contribute the majority, though the precise amount is difficult to quantify, of the incremental profits associated with the" accused products. *Id.* Mr. Jarosz then presents a range of "reasonable royalty" values based on the "Incremental Benefit Approach." *Id.*

Mr. Jarosz, in a footnote, explains how that "range" was calculated. Namely, as noted above, Mr. Jarosz used the calculated "list price" difference between the accused and non-accused products (which did not account for any valuation distinction between patented and unpatented technology) to compute a "profit difference" value for each new patient (which likewise did not account for any valuation distinction between patented and unpatented technology).

Then, in two of three calculations, Mr. Jarosz used that "profit difference" value for each new patient, the difference between those calculations being the number of new patients. In the third calculation, Mr. Jarosz used a different commercial activity. But, none of those three numbers reflected any distinction between patented and non-patented technology, as discussed above.

(b) Apportionment Rate

In a footnote, Jarosz Report at 73 n. 359, Mr. Jarosz explains that to arrive at a range of "reasonable royalty" per unit values, he first took the lower of the foregoing three numbers, divided that number by ½ (*i.e.*, 50%), and arrived at the lower number in a range of "reasonable royalty" values. He secondly took the highest of those three numbers (which was based on a different commercial activity, at least arguably not reflective of actual revenues to ZLC due to the alleged

infringement because it was based on an overall minor commercial activity) and again divided that number by ½ (*i.e.*, 50%).

The problem comes from Mr. Jarosz's 50% reduction. Again, the immediately foregoing portions of Mr. Jarosz's report state Mr. Jarosz's understanding that the patented technology (1) "contributed substantially" to higher profits, and (2) "were, in large part, driven by the improvements," i*d.* at 68, and his understanding of the "importance of the patents-at-issue," relying on various depositions and other materials, i*d.* at 69-73, and Mr. Jarosz's discussion with Dr. Wolf after which Mr. Jarosz apparently concluded that the patented technology was the "primary contributor of improvements" to the accused products, from which Mr. Jarosz concluded that "[t]he patents-in-suit appear to contribute the majority, though the precise amount is difficult to quantify, of the incremental profits associated with the" accused products. *Id.*

But, Mr. Jarosz was unable to articulate any precise basis for the 50% reduction during his deposition, and it seems fair to say that, based on his report and his deposition, that was an entirely subjective percentage that Mr. Jarosz applied based on materials he had reviewed (as cited in footnotes on pages 68-73 of his report) which included, but was not limited to, a discussion with Dr. Wolf, Philips' technical expert. Rule 702(c) requires that "the testimony is the product of reliable principles and methods." Mr. Jarosz points to no treatises, rules of accounting, professional papers, *etc.* suggesting that "reliable principles and methods" include adopting a percentage (here, 50%) that is not based on any accounting method or principle, or on any other objective assessment, but is instead based on Mr. Jarosz's subjective assessment (albeit based, in part, on a conversation with Dr. Wolf) that the patented technology was "primarily responsible" for the alleged infringement.

Moreover, simply listing the attributes/differences between the prior non-accused product and the accused product (three differences in one list, and four differences in a second list), noting an understanding that the patented technology contributed to two of three, or two of four, of the differences, provides no "reliable principle[ ] and method[ ]" for assessing "the use made of the invention by the infringer" as required by § 284. Yes, Mr. Jarosz earlier pointed to deposition testimony and the like that discussed the relative importance of features of the patented technology, but Mr. Jarosz still failed to use "reliable principles and methods" in translating the same into an objective reliable percentage. For example, given the relative importance, according to Mr. Jarosz, of the patented technology to the accused product, why not choose 95%, as opposed to 50% – or 90%,

or 75%, or 35% – the point being that 50% was a wholly subjective figure not born from the application of "reliable principles and methods."

As noted above, in *LaserDynamics*, the damages expert, Mr. Murtha, first determined that a royalty rate of 6% would be a reasonable royalty rate to pay on ODDs alone, namely the infringing component. 694 F.3d at 60. However, because the defendant, QCI, sold laptops rather than ODDs *per se*, Mr. Murtha attempted to arrive at a royalty rate based on the complete laptop computer. *Id.*

The Federal Circuit explained that "[b]ased on his discussions with LaserDynamics' other experts, Mr. Murtha concluded that the patented technology in the ODD is responsible for one-third of the value of a laptop computer containing such an ODD. Thus, he arrived at his 2% per laptop computer rate simply by taking one-third of the 6% rate for the ODD." 694 F.3d at 61. In *LaserDynamics*, the defendant, QCI never challenged that one-third apportionment calculation.

Nevertheless, the Federal Circuit plainly rejected that type of subjective methodology in arriving at an apportionment rate: "Furthermore, Mr. Murtha's one-third apportionment to bring his royalty rate down from 6% per ODD to 2% per laptop computer appears to have been plucked out of thin air based on vague qualitative notions of the relative importance of the ODD technology. * * * This complete lack of economic analysis to quantitatively support the one-third apportionment echoes the kind of arbitrariness of the '25% Rule' that we recently and emphatically rejected from damages experts, and would alone justify excluding Mr. Murtha's opinions in the first trial." 694 F.3d at 69, citing *Uniloc*, 632 F.3d at 1318.

The situation here is similar. As discussed above, Mr. Jarosz's three "profit difference" values, the starting point for Mr. Jarosz reasonable royalty calculation in footnote 359, did not reflect any distinction between patented and non-patented technology, and were based on "prices" associated with the accused LifeVest products as a whole. Jarosz Report at 73 n. 359. Mr. Jarosz arrived at the 50% figure because to him, based on a conversation with Dr. Wolf, Jarosz Report at 73 n. 358, "[t]he patents-in-suit appear to contribute the majority * * * of the incremental profits associated with the" accused products. Jarosz Report at 73.

It is true that Mr. Jarosz's 50% reduction, unlike the "25% Rule" rejected in *Uniloc*, is tied to the facts of this case. The question, though, is whether *Daubert* and Rule 702 permit a damages expert to assert a subjective percentage for apportioning damages based on the expert's understanding that "[t]he patents-in-suit appear to contribute the majority * * * of the incremental profits associated with

the" accused products. In the master's view, regardless of how "flexible" a damages analysis must be to secure the goal of adequately compensating a patentee under § 284 for infringement, permitting such a subjective step at a critical point in the methodology runs counter to the purpose and intent of *Daubert* and Rule 702, as interpreted by the Federal Circuit. Namely, such a methodology is not based on reliable principles or methods, and/or is not based on sufficient facts and data.

Nor does that overlook the difficulty of apportioning damages when an accused device is a multi-component device and there is no "market" *per se* for individual components, or groups of components. That difficulty does not open the door to purely subjective analyses or an analysis based on unreliable principles or methods, or based on insufficient facts and data.

For example, in *Summit 6*, Summit's patent was drawn to a tool used to insert photos to a website. Summit sued Samsung Electronics Co., Ltd, and others, asserting that sending photographs *via* the multimedia messaging service (MMS) used by smartphones and tablets designed, manufactured and sold by Samsung infringed. Summit's damages expert was Mr. Paul Benoit. Samsung urged that the district court had erred in failing to exclude Mr. Benoit's testimony.

Mr. Benoit first calculated, using Samsung data, that $ 14.15 was attributable to the camera component in Samsung's phones. To further apportion the camera-related revenue, Mr. Benoit estimated the percentage of camera users who used the camera to perform the infringing method. He did so by relying on surveys conducted by Samsung and another survey he had uncovered. Mr. Benoit calculated that at least 77.3% of the users who captured only photos shared those photos, at least 41.2% shared those photos *via* MMS, and 100% of the photos shared *via* MMS were resized. Mr. Benoit multiplied those percentages to arrive at his opinion that 20.8% of camera users utilized the camera for its infringing features. Thus, Mr. Benoit concluded that 20.8% of the $ 14.15 per phone revenue, *i.e.*, $ 2.93, was due to infringing features. Using Samsung annual reports, Mr. Benoit then concluded that $ 0.56 of the $ 2.93 revenue was profit attributable to the infringement. 802 F.3d at 1297. Mr. Benoit testified that during a hypothetical negotiation to determine a reasonable royalty, because neither party had a stronger negotiating position, the parties would have evenly split the $ 0.56 to arrive at a reasonable royalty of $ 0.28 per device. Mr. Benoit supported his opinion of an even split based on, *inter alia*, three academic articles. *Id.*

The Federal Circuit concluded that "Mr. Benoit's damages methodology was based on reliable principles and was sufficiently tied to the facts of the case." *Id.* at 1298. The Federal Circuit further

explained that Mr. Benoit "envisioned a hypothetical negotiation in which the parties would have bargained for respective shares of the economic benefit, given their respective bargaining positions and alternatives to a negotiated agreement. Mr. Benoit's methodology was structurally sound and tied to the facts of the case." *Id.*

Here, in contrast, Mr. Jarosz offers no objective support for his 50% apportionment rate.

On the other hand, on pages 68-73 (and earlier discussions summarized here), Mr. Jarosz provides citations to depositions, exhibits, webpages, expert reports, and articles that appear, collectively at least, to support Mr. Jarosz's conclusion that "[b]ased on the documents and testimony in this case, it appears that the patents-in-suit are a significant driver of the value to the accused Lifecor system." Jarosz Report at 73. Those portions of Mr. Jarosz's report plainly pass muster under *Daubert* and Rule 702. The information that Mr. Jarosz relied upon is plainly set out, as is the methodology, facts and data. Moreover, other than issues regarding "list prices" and "smallest salable patent practicing unit" discussed below, ZLC has not expressly moved to exclude that testimony. Further, plainly those portions of Mr. Jarosz's report are subject to the "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof" envisioned by the Supreme Court in *Daubert*, 509 U.S. at 596.

To be clear, the objectionable portion of Mr. Jarosz's report is the 50% apportionment rate. In a hypothetical negotiation for a "reasonable royalty," the parties, in attempting to assess the "value" of the licensed technology, and what the parties would be willing to pay and accept, could assert anywhere from 0.0001% to 99.9% as the "value" of the patented technology. Other than the evidence that Mr. Jarosz relies in concluding that "the patents-in-suit are a significant driver of the value to the accused Lifecor system," no reliable methodology, or facts or data, have been presented that would identify any particular percentage within that range.

Accordingly, Mr. Jarosz's testimony asserting a 50% apportionment rate, in the master's view, should be excluded for at least two reasons. First, unlike the damages expert in *Summit 6*, Mr. Jarosz cites no objective support for that 50% rate. Rather, like in *LaserDynamics*, that particular number seems to have been "plucked out of thin air." Second, permitting Mr. Jarosz to testify to that 50% rate runs the risk of misleading the jury under the "evidentiary rule" of *LaserDynamics*, discussed above. Namely, allowing Mr. Jarosz to first present his three "profit difference" values, the starting point for Mr. Jarosz reasonable royalty calculation in footnote 359, and then introduce an arbitrary, subjective

50% rate runs the risk of a jury concluding that the resulting number must be "reasonable" because it is only 50% of the "profit difference" values.

(c) Conclusion

For the foregoing reasons, the master recommends that the Court exclude Mr. Jarosz's report and proposed testimony regarding a 50% apportionment rate as expressed in footnote 359 of his report. The master does not recommend excluding any other portion of Mr. Jarosz's report or proposed testimony.

(5) "list prices"

As noted above, ZLC moves to exclude Mr. Jarosz's report and testimony under Rule 702 and *Daubert* urging that his opinion "suffers from three fundamental defects: * * * (2) his damages analysis is based on 'list prices' that ZOLL Lifecor neither received nor anticipated or projected receiving, and they overstate ZOLL Lifecor's actual revenues by nearly half a billion dollars * * *" ZLC's Jarosz Motion [Dkt. 453] at 1.

As discussed above, Mr. Jarosz's report, under the heading "(2) Benefits Attributable to the Alleged Infringement," purports to compare the "profitability" of the accused products versus the prior non-accused product. Jarosz Report at 63. In doing so, Mr. Jarosz relied, *inter alia*, on certain "list prices." ZLC contends that those prices do not reflect ZLC's projected or anticipated revenue differences, or projected or anticipated profit differences, between the accused and prior non-accused products. Or revenues that ZLC actually received. ZLC contends that, as a result, Mr. Jarosz grossly overstates actual or anticipated revenue.

There is no question that Mr. Jarosz based his calculations on data supplied by ZLC. Moreover, there is no question that those data related to the "profitability" of the accused products as compared to the prior non-accused products. Although those data ZLC now urges are untrustworthy and unreliable, because those data, *inter alia*, grossly overstate actual or anticipated revenue, and were produced as part of a "negotiation" with a government agency, the fact remains that those data are attributable to ZLC.

ZLC has not shown that Mr. Jarosz's analysis or reliance on those data is so fundamentally flawed as to require exclusion under *Daubert* or Rule 702. Plainly, this is an issue that falls within the

scope of "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof" envisioned by the Supreme Court in *Daubert*, 509 U.S. at 596.

Also, as discussed above, contrary to Philips' arguments, Mr. Jarosz's three "profit difference" values, the starting point for Mr. Jarosz reasonable royalty calculation in footnote 359, did not reflect any distinction between patented and non-patented technology.

(6) "smallest salable patent practicing unit" or SSPPU

As also noted above, ZLC moves to exclude Mr. Jarosz's report and testimony under Rule 702 and *Daubert* urging that his opinion "suffers from three fundamental defects: * * * (3) he failed to consider the smallest salable patent practicing unit in his analysis." ZLC's Jarosz Motion [Dkt. 453] at 1.

Beginning with the premise that patent damages in a "case involving multicomponent products, patentees may not calculate damages based on sales of the entire product, as opposed to the smallest salable patent-practicing unit, without showing that the demand for the entire product is attributable to the patented feature," *LaserDynamics*, 694 F.3d at 67-68, ZLC urges that "[h]ere, the SSPPU available commercially is at most an automated external defibrillator ('AED')."

Philips responds that "Zoll has not (and cannot) provide a single case where the smallest salable unit is the patentee's product. Instead, the Federal Circuit's case law directs the parties to look to the smallest unit of the accused product that 1) practices the patent, and 2) is salable." Philips Jarosz Opp. [Dkt. 535] at 18. Philips notes that the "smallest salable patent-practicing unit" was the LifeVest. Philips urges that Mr. Jarosz did not use the value of the entire LifeVest to calculate a royalty, but instead calculated the "incremental value" of features added the accused infringing product, over the features of the prior non-accused product. Philips contends that Mr. Jarosz apportioned that value to focus on the value of the patented features.

For the reasons discussed above, contrary to Philips' arguments, Mr. Jarosz's three "profit difference" values, the starting point for Mr. Jarosz reasonable royalty calculation in footnote 359, did not reflect any distinction between patented and non-patented technology. Furthermore, Mr. Jarosz's subjective, arbitrary "apportionment rate" of 50% has been rejected for the reasons given above.

However, it is true, as Philips contends, that "Zoll has not * * * provide[d] a single case where the smallest salable unit is the patentee's product." Further, it is true, as Philips contends, that "Federal

Circuit's case law directs the parties to look to the smallest unit of the accused product that 1) practices the patent, and 2) is salable." And it is also true, as Philips contends, that the "smallest salable patent-practicing unit" was the LifeVest.

However, in *VirnetX*, the Federal Circuit held that the district court's instruction that:

> In determining a royalty base, you should not use the value of the entire apparatus or product unless either: (1) the patented feature creates the basis for the customers' demand for the product, or the patented feature substantially creates the value of the other component parts of the product; or (2) the product in question constitutes the smallest saleable unit containing the patented feature.

was erroneous because "the instruction mistakenly suggests that when the smallest salable unit is used as the royalty base, there is necessarily no further constraint on the selection of the base. That is wrong. For one thing, the fundamental concern about skewing the damages horizon—of using a base that misleadingly suggests an inappropriate range—does not disappear simply because the smallest salable unit is used." 767 F.3d at 1327.

The Federal Circuit explained that "the smallest salable unit approach was intended to produce a royalty base much more closely tied to the claimed invention than the entire market value of the accused products." *Id.* The Federal Circuit further explained that "[w]here the smallest salable unit is, in fact, a multi-component product containing several non-infringing features with no relation to the patented feature (as VirnetX claims it was here), the patentee must do more to estimate what portion of the value of that product is attributable to the patented technology. To hold otherwise would permit the entire market value exception to swallow the rule of apportionment." *Id.* at 1327-28.

Here, quite simply, Philips cannot on the one hand assert that the "smallest salable patent-practicing unit" was the LifeVest – which is true – and on the other hand assert that Mr. Jarosz did not use the value of the entire LifeVest to calculate a "reasonable royalty," but instead calculated the "incremental value" of features added the accused infringing product, over the features of the prior non-accused product. Mr. Jarosz's calculation of the "incremental value," as discussed at length above, plainly based his three "profit difference" values, the starting point for his reasonable royalty calculation in footnote 359, did not reflect any distinction between patented and non-patented technology, and relied on commercial activity related to the accused LifeVests as a whole, as opposed to any particular portion thereof. Second, when Philips contends that Mr. Jarosz apportioned that

value to focus on the value of the patented features, presumably that is a reference to the 50% apportionment rate, rejected for the foregoing reasons.

Having said all of that, in light of the foregoing discussion, it is believed sufficient to reject ZLC's contention that [h]ere, the SSPPU available commercially is at most an automated external defibrillator ('AED')," for the reason that, as Philips asserts, "Zoll has not * * * provide[d] a single case where the smallest salable unit is the patentee's product."

Here, based on the present record, as Philips asserts, the SSPPU is the accused LifeVest. And that was the "royalty base" used by Mr. Jarosz. Whether doing so runs afoul of *VirnetX* is an issue for another day.

4. Remainder of Jarosz Report

a) Licensing Comparables Approach

Under the heading "b) Licensing Comparables Approach," Mr. Jarosz asserts that "an appropriate price for the use of a patent can be identified through the examination of the terms of actual transfers of rights (e.g., licenses) involving similar technology." Jarosz Report at 73. After discussing several licenses, *id* at 73-88, Mr. Jarosz concludes that "the Licensing Comparables Approach provides limited useful guidance here." *Id.* at 89.

Although ZLC asserts generally that Mr. Jarosz report and anticipated testimony based on that report should be excluded, ZLC has not raised any specific objections to this portion of Mr. Jarosz's report.

b) Design-Around Approach

Mr. Jarosz explains that "[a] Design-Around analysis examines the costs that the infringer would have incurred to generate the benefits of the patent, as closely as possible, without practicing the patent. In essence, it evaluates the cost of avoiding infringement by adopting the non-infringing, next best alternative." Jarosz Report at 89. After discussing the "design-around approach," *id.* at 89-92, Mr. Jarosz concludes that the "design-around" analysis is not appropriate. *Id.* at 92.

ZLC has not specifically objected to that portion of the report or proposed testimony.

c) Mr. Jarosz's Summary

Mr. Jarosz concludes that "[i]n light of the foregoing, the most reliable indicator of the reasonable royalty (which reflects the value attributable to the alleged infringement) that should be paid to Philips in compensation for the unauthorized use of its patented technology is provided by the Incremental Benefit Approach." *Id.* at 92.

d) Qualitative Factors

Mr. Jarosz also discusses the *Georgia-Pacific* Factors, *id*, at 94-100, concluding that some factors were neutral, and some factors favored an upward move in a calculating a "reasonable royalty," but concluding that, after consideration of the same, reasonable royalty damages should be in the "middle to upper portion of the above range." *Id.* at 100.

ZLC has not expressly moved to exclude Mr. Jarsoz's report or proposed testimony based on this portion of his report.

C. Recommendation

For the foregoing reasons, the master recommends that ZLC's Motion to Exclude Testimony of Mr. John Jarosz [Dkt. 453] be GRANTED-IN-PART and DENIED-IN-PART.

To the extent that Mr. Jarosz's report and subsequent testimony is admitted, the master recommends that the discussion of an alleged reduction in the cost of producing the accused products be excluded. That alleged reduction in cost is not used in Mr. Jarosz's subsequent calculations, appears to have been included only to bolster the alleged "reasonableness" of his approach, and runs the risk of misleading a jury.

Also, for the foregoing reasons, the master recommends that the Court exclude Mr. Jarosz's report and proposed testimony regarding a 50% apportionment rate as expressed in footnote 359 of his report. The master does not recommend excluding any other portion of Mr. Jarosz's report or proposed testimony.

Except for the foregoing, the master recommends that the Court DENY ZLC's motion.

IX.
ZLC's Motion to Exclude Testimony of Prof. Patrick Wolf [Dkt. 454]

A. Brief Description of Motion and Parties' Arguments

1. ZLC's Motion

As noted in the above section addressing ZLC's motion to exclude Mr. Jarosz's expert report and testimony on damages, Mr. Jarosz relied in part on a discussion with Dr. Wolf, Philips' technical expert. Apparently, this was a single conversation that neither Mr. Jarosz nor Dr. Wolf documented, and neither could recall much about that conversation during their depositions.

ZLC seeks to exclude Dr. Wolf's opinions "on the following damages-related issues: (1) the importance of the patented features to a wearable cardiac defibrillator ('WCD'), (2) the relative importance of the differences between ZOLL Lifecor's WCD 2000 and WCD 3000 products, and (3) whether the asserted claims of the patents-in-suit were the primary reason for the benefits associated with the biphasic waveform, size, and weight improvements of the WCD 3000 over the WCD 2000." ZLC Wolf Motion [Dkt. 454] at 1. ZLC contends that Dr. Wolf is not qualified to render opinions on those topics. Additionally, ZLC urges that Dr. Wolf's opinions should be excluded because those opinions were not disclosed in his expert report. *Id.* at 1-2.

In particular, (although portions of ZLC's memorandum in support of its motion have been sealed, the following is not believed to disclose any "confidential information" – these are the parties' assertions through their experts), ZLC asserts that Mr. Jarosz relied on a discussion/conversation with Dr. Wolf to assert:

- the "patents-at-issue are primarily responsible for the biphasic waveform benefits, and for the size and weight reduction benefits" of the WCD 3000 Ex. 4 (Jarosz Rpt.) at 64;
- "almost every component related to the shock delivery (e.g., battery, insulation, circuitry) is likely smaller, lighter, and less costly to manufacture as a result of the patented technology" (*id.* at 64-65); and
- "the patents-in-suit are the primary contributor of improvements in the WCD 3000 unit" (*id.* at 73).

2. Parties' Contentions

ZLC urges first that Dr. Wolf is not qualified to testify on the relative importance of the features of the LifeVest because, while he is a professor of Biomedical Engineering at Duke University and has experience performing research with defibrillators, he is not an expert with the accused LifeVest, has never designed a WCD, is not an expert in patient compliance or customer demand, has no training or expertise in the issues of WCD design, compliance, marketing, sales, or consumer demand or "any other subjects essential to provide an opinion on the relative value of the features included in a WCD device. Nor is he a medical doctor." ZLC's Wolf Memo [Dkt. 457] at 7.

ZLC urges second that "[e]ven if Professor Wolf were 'qualified as an expert' to opine on the relative importance of the various differences between the WCD 2000 (which he is not), his opinions still should be excluded because they are not based on 'a reliable foundation' or 'scientifically valid principles.' " *Id.* at 9, quoting *Daubert*, 509 U.S. at 597. In particular, ZLC notes Dr. Wolf's deposition testimony that he had not attempted any comprehensive study of the differences between the accused and non-accused products, he had not been asked to evaluate the prior non-accused product, he did not know anything about various software and hardware components of the prior non-accused product, and was not aware of all of the differences between the prior non-accused product and the accused product. *Id.* at 10-11.

ZLC asserts that "[g]iven that Professor Wolf was not even aware of all of the differences between the WCD 2000 and WCD 3000 devices, it would not be possible for him to perform a reliable analysis of the relative importance of those changes." *Id.* at 11.

ZLC asserts that "Professor Wolf's opinions concerning the importance of the specific feature of the 'size and weight' of a WCD are equally unreliable." *Id.* at 12. ZLC asserts that Dr. Wolf's opinions *vis-à-vis* "size and weight" were based on his experience with "wearing things like backpacks and tool belts," and that he had not relied on any clinical studies, survey information, or articles relating to "how size and weight of a wearable defibrillator impacts its effectiveness." *Id.*

ZLC contends, *inter alia*, that "Professor Wolf has not employed any particular methodology for his analysis, much less one that is testable or subject to peer review. Instead, Professor Wolf's opinion is nothing more than speculation based on his 'intuition' in an area where he lacks any experience above and beyond a lay person." *Id.*

ZLC contends that Dr. Wolf "appears to have based these opinions on the generic fact that the WCD 2000 was a monophasic device and the WCD 3000 was a biphasic device," but urges that "[e]ven assuming that the transition to biphasic contributed to the reduced size and weight of the WCD 3000, however, that would not necessarily mean that the Philips patents should be credited," *id.* at 12-13, because a biphasic waveform *per se* was not Philips' invention.

Lastly, ZLC urges that Dr. Wolf failed to include those opinions in his Rule 26(2)(B) expert report. Under the four factor analysis of *Wonderland NurseryGoods Co. v. Thorley Indus., LLC*, 2014 WL 199789, at *4 (W.D. Pa. Jan. 17, 2014), (1) the prejudice or surprise, (2) the ability to cure the prejudice, (3) the extent to which allowing the evidence would disrupt the orderly and efficient trial of the case, and (4) bad faith or willfulness in failing to comply with a court order or discovery obligation, ZLC urges that the prejudice to ZLC cannot be cured because neither Dr. Wolf nor Mr. Jarosz remember the details of what they discussed. ZLC's Wolf Memo [Dkt. 457] at 15-16.

Philips responds that ZLC "seeks to exclude the testimony of a renowned expert with over three decades of experience directly related to research, development, and implementation of life-saving biphasic defibrillation waveforms, such as those claimed in Philips's patents and used by the accused devices. Ignoring Dr. Wolf's academic credentials, his dozens of relevant published articles, and years of industry consulting, Zoll argues that he is "unqualified" to opine on whether Zoll's use of Philips's patented biphasic technology contributed to the relative success of Zoll's biphasic LifeVest product as compared to its prior monophasic versions. Zoll argues that Dr. Wolf is unqualified to do so primarily because he does not have direct experience designing or marketing 'wearable defibrillators' as opposed to other external or implantable defibrillators more generally. This standard, however, would exclude the testimony of nearly any expert in the field of defibrillation who has not worked directly with the LifeVest, as Zoll is the exclusive provider of 'wearable defibrillators' within the larger defibrillator industry. But the *Daubert* standard is both liberal and unrestrictive, and courts have routinely ruled that experience within a niche subset of any particular technical or specialized field is not required in order to provide admissible expert testimony. Dr. Wolf's opinions are qualified and reliable, and the Court should deny Zoll's motion to exclude him from testifying at trial." Philips' Wolf Opp. [Dkt. 538] at 1.

In particular, Philips recounts Dr. Wolf's qualifications in the field of defibrillation and defibrillation waveforms, *id* at 1-3, notes that in his report, Dr. Wolf offered opinions related to the

efficacy, size, and weight benefits which Philips urges were realized by ZLC's use of Philips' technology, *id.* at 3-4, notes that Dr. Wolf in his rebuttal report to Dr. Berger's report also discussed the alleged use of Philips' technology in accused products, *id* at 4-5, that in formulating those opinions, and Dr. Wolf reviewed an analyzed a number of documents produced by ZLC, *id* at 5. Philips contends that "[i]n sum, size and weight reductions and efficacy gains due to the improvements of Philips 's patented impedance-compensated biphasic waveform are a recurring theme throughout Dr. Wolfs reports and opinions." *Id.*

Philips urges that Dr. Wolf's qualifications permit him to testify on "the relative importance of the difference between the WCD 2000 and WCD 3000" defibrillator products. *Id.* at 7. Philips further urges that "Dr. Wolf does not need to have direct experience in the niche market of 'wearable defibrillators' in order to be qualified to testify on the subject of wearable external defibrillators in this case," and, under ZLC's proposed standard, "no one except those who work directly with the LifeVest devices could ever serve as an expert in this case, as no other company currently even offers a wearable defibrillator product * * *." *Id.* at 8.

Philips says that "Dr. Wolf does not attempt to quantify the 'economic value' of Zoll's design changes, which is within the province of Mr. Jarosz's damages report. He instead offers opinions regarding the significant size, weight, and efficacy benefits Zoll garnered by using Philips's breakthrough biphasic technology, a subject on which Dr. Wolf's research and experience make him uniquely qualified to testify." *Id.* at 10.

With respect to ZLC's argument that Dr. Wolf did not perform any comprehensive studies on the differences between the accused and non-accused products, Philips argues that "is not the standard, and is certainly not necessary for Dr. Wolf to offer his expert opinions on the size and weight reductions and the efficacy gains between Zoll's monophasic and biphasic devices. Based on Dr. Wolf's experience in the development of industry-shifting biphasic waveform breakthroughs in other external defibrillator contexts * * *, it is both logical and commonsensical to apply them to wearable external defibrillators, and Zoll's own documents and testimony confirm Dr. Wolf's opinion." *Id.* Philips notes that Dr. Wolf testified that "inasmuch as you would need to have a smaller, lighter defibrillator to make a wearable defibrillator, [the patents] teach you how to make a wearable defibrillator." *Id.* at 11.

Philips urges that Dr. Wolf's opinions are expressed in his reports, pointing to, for example, paragraphs 42-46 of one of Dr. Wolf's reports, *id.* at 14-15, and says that it is not unusual for Dr. Wolf not to remember much about the conversation with Mr. Jarosz because it occurred seventeen months before Dr. Wolf's deposition. *Id.* at 15.

ZLC replies that the three opinions it seeks to exclude, *i.e.*, "(1) the consumer, economic, compliance or design importance of size and weight to a WCD, (2) the relative importance of the feature differences between the WCD 2000 and WCD 3000, and (3) that the asserted patents were 'primarily responsible' for the size, weight, and efficacy improvements to the WCD 3000," were not disclosed in Dr. Wolf's expert report. ZLC's Wolf Reply [Dkt. 579] at 1. To the extent that opinions were expressed in Dr. Wolf's report, ZLC emphasizes that "*ZOLL Lifecor is not seeking to exclude those opinions.*" *Id.* (emphasis by ZLC). ZLC contends that "[t]here is nothing in these paragraphs [of Dr. Wolf's report] that address the consumer or economic importance of various features of a WCD, or the relative importance of the differences between the WCD 2000 and WCD 3000, or whether the size, weight and efficacy improvements in the WCD 3000 were the alleged result of Philips's specific claimed waveform, as opposed to biphasic waveform technology more generally." *Id.*

In particular, ZLC urges that "ZOLL Lifecor is not alleging that Prof. Wolf is not qualified to testify generally about the technical benefits of biphasic waveforms over monophasic waveforms, or address the technical benefits of the Philips patents in the general context of AEDs. He should not, however, be allowed to extend those opinions to an assessment of the consumer, economic, compliance or design value of those benefits to a WCD, which is indisputably outside the scope of his qualifications." *Id.* at 2.

B. Discussion

Initially, it should be noted that the areas of testimony that ZLC seeks to exclude Dr. Wolf from testifying about:

- the "patents-at-issue are primarily responsible for the biphasic waveform benefits, and for the size and weight reduction benefits" of the WCD 3000 Ex. 4 (Jarosz Rpt.) at 64;
- "almost every component related to the shock delivery (e.g., battery, insulation, circuitry) is likely smaller, lighter, and less costly to manufacture as a result of the patented technology" (*id.* at 64-65); and

- "the patents-in-suit are the primary contributor of improvements in the WCD 3000 unit" (*id.* at 73).

are portions of Mr. Jarosz's report – but ZLC's above motion *vis-à-vis* Mr. Jarosz's testimony does not seek to exclude Mr. Jarosz's testimony regarding those topics – only Dr. Wolf's potential testimony regarding those topics.

1. The Conversation

At its core, ZLC's motion is based on what appears to be a single conversation ("the Conversation") between Mr. Jarosz, Philips' damages expert, and Dr. Wolf, Philips' technical expert. That "Conversation" was not, apparently, documented by either Dr. Wolf or Mr. Jarosz. And, during their respective depositions, apparently neither Dr. Wolf nor Mr. Jarosz were able to recount the "details" of that conversation because of, according to Philips, the time-lapse between "the Conversation" and the subsequent depositions.

Although Mr. Jarosz, in his report, refers to Dr. Wolf's expert report a number of times, it appears that ZLC's motion is limited to those instances where Mr. Jarosz has included a footnote citation in his expert report "Conversation with Dr. Wolf." There are eight such instances, namely page 17 n. 91, page 42 n. 240, page 64 n. 315, page 64 n. 317, page 65 n. 318, page 69 n. 337, page 73 n. 358, page 92 n. 429. Some include parallel citations to portions of Dr. Wolf's report – some do not. Each of those instances are addressed fully below.

ZLC says that it seeks to exclude Dr. Wolf's potential (although ZLC does not use the word "potential") testimony regarding "(1) the consumer, economic, compliance or design importance of size and weight to a WCD, (2) the relative importance of the feature differences between the WCD 2000 and WCD 3000, and (3) that the asserted patents were 'primarily responsible' for the size, weight, and efficacy improvements to the WCD 3000." ZLC's Wolf Reply [Dkt. 579] at 1. ZLC urges that Dr. Wolf has insufficient qualifications or expertise to voice opinions on those topics, and that those opinions were not expressed in Dr. Wolf's reports.

Namely, ZLC presumes that Philips will call Dr. Wolf to testify to "(1) the consumer, economic, compliance or design importance of size and weight to a WCD, (2) the relative importance of the feature differences between the WCD 2000 and WCD 3000, and (3) that the asserted patents were 'primarily responsible' for the size, weight, and efficacy improvements to the WCD 3000,"

because Mr. Jarosz, in his report, refers to "Conversation with Dr. Wolf" in a footnote citation, sometimes with a parallel citation to portions of Dr. Wolf's reports, and sometimes not.

ZLC's motion is thus somewhat unusual in that it seeks to exclude testimony under Rule 702 and *Daubert* that has not yet been definitively proposed – and may never be actually offered. The only thing known for certain at this stage is that Mr. Jarosz cites "the Conversation" in footnotes to his report at several junctures, some with additional citations to Dr. Wolf's reports or other materials, and some without. And, ZLC's motion is drawn to three of eight such citations.

Namely, this motion is not presented as a motion *in limine per se* in connection with a Pre-Trial Statement pursuant to Local Rule LCvR 16.1 C., but rather seeks, under a general *Daubert* challenge, to preemptively exclude "categories" of testimony, that, at this stage, is only "possible" or "potential" testimony by one of Philips' technical expert witnesses based on what appears to be a single "conversation" between that technical expert, Dr. Wolf, and Philips' damages expert, Mr. Jarosz.

Under Local Rule LCvR 16.1 C, as the parties are aware, counsel for plaintiff prepares a Pre-Trial Statement that includes, *inter alia*, an identification of witnesses expected to be called to testify, a designation of potential testimony expected to be presented through a deposition, and copies of expert disclosures, *etc.* Thus, at that stage, counsel for defendants would have some appreciation for the testimony that the plaintiff actually seeks to adduce at trial.

Here, ZLC has not identified any portion of Dr. Wolf's reports that ZLC seeks to exclude (or testimony regarding the same). Indeed, as noted above, ZLC has emphasized that it is not seeking to exclude any testimony by Dr. Wolf regarding information contained in his reports, including information in Dr. Wolf's reports that, according to Philips, relate to the foregoing three categories. In a nutshell, ZLC contends that the information in Dr. Wolf's reports identified by Philips does not relate to foregoing three categories. While Philips asserts that it does.

In all events, however, ZLC has not moved to exclude any of Dr. Wolf's testimony based on his reports. Thus, ZLC's motion should be denied to the extent that it seeks to exclude any testimony by Dr. Wolf based on his reports.

Second, this motion is directed to excluding Dr. Wolf's testimony, but ZLC identifies no portion of Dr. Wolf's deposition testimony that it seeks to exclude. Although ZLC has pointed to portions of Dr. Wolf's deposition in which he expresses an inability to recall "details" regarding "the

Conversation" with Mr. Jarosz, ZLC has not expressly identified that testimony as testimony ZLC seeks to exclude. Thus, ZLC's motion should be denied to the extent that it seeks to exclude any specific deposition testimony by Dr. Wolf.

Third, as noted in the prior section of this Report and Recommendation, although ZLC moves to exclude Mr. Jarosz's report and testimony under Rule 702 and *Daubert* urging that Mr. Jarosz's opinion "suffers from three fundamental defects: (1) his apportionment rate of 50% was not based on any reliable methodology; (2) his damages analysis is based on 'list prices' that ZOLL Lifecor neither received nor anticipated or projected receiving, and they overstate ZOLL Lifecor's actual revenues by nearly half a billion dollars; and (3) he failed to consider the smallest salable patent practicing unit in his analysis," ZLC's Jarosz Motion [Dkt. 453] at 1, that motion does not expressly seek to prevent Mr. Jarosz from testifying on the current three topics. ZLC's argument *vis-à-vis* the 50% apportionment rate focused on its argument that the 50% reduction was "plucked out of thin air" contrary to, *inter alia*, the rationale of *LaserDynamics*. ZLC's arguments regarding "list prices" and "smallest salable patent practicing unit" relate to different issues.

Yes, ZLC, in its Jarosz motion, criticizes Dr. Wolf's qualifications where Mr. Jarosz cites "the Conversation," but focuses on the 50% reduction being "plucked out of thin air." ZLC did not assert that Mr. Jarosz should be precluded from testifying on "(1) the consumer, economic, compliance or design importance of size and weight to a WCD, (2) the relative importance of the feature differences between the WCD 2000 and WCD 3000, and (3) that the asserted patents were 'primarily responsible' for the size, weight, and efficacy improvements to the WCD 3000."

At the outset, it is noted that the Court's Local Rule, LCvR 16.1 C.4, requires:

> 4. Before filing a motion in *limine*, counsel or an unrepresented party shall confer with all other counsel and unrepresented parties in an effort to reach agreement on the issue to be raised by the motion. In the event an agreement is not reached, the motion in *limine* shall be accompanied by a certificate of the movant denominated a Motion in *Limine* Certificate stating that all parties made a reasonable effort to reach agreement on the issue raised by the motion.

Although the ZLC's current motion is not for a order *in limine per se*, insofar as it appears from the parties' submissions, the parties have not "confer[ed] with all other counsel and unrepresented parties in an effort to reach agreement on the issue to be raised by the motion," and have not provided the requisite "Motion in *Limine* Certificate."

Given the current "indefinite" nature of what testimony Philips actually intends to elicit from Dr. Wolfe *vis-à-vis* the three topics identified in ZLC's motion, it would seem that this issue is more properly resolved in a conference among the parties, as envisioned by LCvR 16.1 C.4. And then, to the extent that the parties are unable to reach complete agreement, the parties may choose to present their disagreement to the Court for resolution at the appropriate stage.

Namely, neither the master nor the Court, at this stage, based on the parties' submissions, knows the full metes and bounds of the testimony that Philips intends to introduce at trial through Dr. Wolf.

Accordingly, the foregoing three areas of testimony listed by ZLC is "potential testimony" (however characterized by the parties) because ZLC does not point to any specific deposition or other testimony, for example, by Dr. Wolf, that ZLC seeks to exclude. The deposition testimony that ZLC has referenced largely relates to Dr. Wolf's and Mr. Jarosz's inability to recall details of "the Conversation." Again, ZLC's motion, insofar as understood, does not seek to exclude Dr. Wolf's and Mr. Jarosz's deposition testimony *vis-à-vis* a conversation that neither can clearly recall.

Nor has Philips pointed to any specific deposition or other testimony, for example, by Dr. Wolf, that Philips seeks to present at trial that would potentially constitute testimony on those topics outside the scope of Dr. Wolf's expert reports. Namely, Philips does not definitively say that it intends to introduce testimony by Dr. Wolf on the foregoing three topics.

Rather, Philips, pointing to various paragraphs in Dr. Wolf's reports, urges that opinions on those topics <u>were</u> expressed in Dr. Wolf's reports, although perhaps not directly. ZLC responds that the paragraphs that Philips cites were not directed to the foregoing opinions, and emphasizes that "*ZOLL Lifecor is not seeking to exclude those opinions.*" *Id.* (emphasis by ZLC). Namely, ZLC does not seek to exclude opinions expressed in Dr. Wolf's reports. But, Philips does <u>not</u> urge that Dr. Wolf should be permitted to express opinions that are not included in his reports.

Thus, resolution of that debate would seemingly require comparing Dr. Wolf's proposed testimony against his reports. But, at the moment, there is no definitive "testimony" to use as a comparison to Dr. Wolf's report to determine what to "exclude." Yes, ZLC lists the three topics noted above, but, as discussed more fully below in conjunction the Jarosz report, those three topics – at least as phrased by ZLC – cut a far broader path of "exclusion" than perhaps justified. And, again,

Philips has not definitively asserted that it intends to present testimony by Dr. Wolf on those three topics, at least to the scope presented by ZLC, or outside the scope of Dr. Wolf's reports.

2. Rules 702, 703 and 705

Although ZLC's motion is directed to potential testimony by Dr. Wolf, and not Mr. Jarosz, to the extent that Mr. Jarosz's report and proposed testimony relies on facts or data supplied by Dr. Wolf, the question of exclusion implicates not only Rule 702, but Rules 703 and 705, FEDERAL RULES OF EVIDENCE, as well. Neither Philips nor ZLC has fully addressed that in their current submissions.

Rule 703 provides (bracketed numbers added):

> [1] An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. [2] If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. [3] But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

In *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286 (Fed. Cir. 2014), the Federal Circuit reversed the district court's exclusion of proposed testimony by Apple's damages expert because he had relied on information supplied by a technical expert that Apple had hired. The Federal Circuit noted that "[e]xperts routinely rely upon other experts hired by the party they represent for expertise outside of their field," and "[c]onsistent with Rule 703, patent damages experts often rely on technical expertise outside of their field when evaluating design around options or valuing the importance of the specific, infringing features in a complex device." *Id.* at 1321. Thus, plainly, simply because Mr. Jarosz relied on a "Conversation with Dr. Wolf," in whole or in part, as support would not necessarily exclude Mr. Jarosz's testimony. But that depends on the "facts and data" communicated to Mr. Jarosz from Dr. Wolf.

Under sentence [2] of Rule 703, the facts or data that Mr. Jarosz received from Dr. Wolf need not be admissible for Mr. Jarosz's testimony to be admissible, but that is subject to the condition that "experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject." *Daubert*, 509 U.S. at 595. Namely, if the Court determines that the "facts or data" Mr. Jarosz received from Dr. Wolf did not constitute "facts or date" that "experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the

subject," then this portion of Rule 703, as well as Rule 702 and *Daubert*, would seemingly preclude Mr. Jarosz from relying on such "facts and data."

And Third Circuit law makes that part of the "gatekeeping function." *See e.g.*, *Paoli II*, 35 F.3d at 748 (in the context of discussing Rule 703, "We now make clear that it is the judge who makes the determination of reasonable reliance, and that for the judge to make the factual determination under Rule 104(a) that an expert is basing his or her opinion on a type of data reasonably relied upon by experts, the judge must conduct an independent evaluation into reasonableness. The judge can of course take into account the particular expert's opinion that experts reasonably rely on that type of data, as well as the opinions of other experts as to its reliability, but the judge can also take into account other factors he or she deems relevant.").

Also, per sentence [3] of Rule 703, if the "facts or data [supplied by Dr. Wolf] would otherwise be inadmissible," then "the proponent of the opinion [Philips] may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect." The Committee Notes explain that

> When information is reasonably relied upon by an expert and yet is admissible only for the purpose of assisting the jury in evaluating an expert's opinion, a trial court applying this Rule must consider the information's probative value in assisting the jury to weigh the expert's opinion on the one hand, and the risk of prejudice resulting from the jury's potential misuse of the information for substantive purposes on the other. The information may be disclosed to the jury, upon objection, only if the trial court finds that the probative value of the information in assisting the jury to evaluate the expert's opinion substantially outweighs its prejudicial effect. If the otherwise inadmissible information is admitted under this balancing test, the trial judge must give a limiting instruction upon request, informing the jury that the underlying information must not be used for substantive purposes. See Rule 105. In determining the appropriate course, the trial court should consider the probable effectiveness or lack of effectiveness of a limiting instruction under the particular circumstances.

Committee Notes on Rules – 2000 Amendment.

A principal problem here is that the "facts and data" provided to Mr. Jarosz by Dr. Wolf during "the Conversation" were, apparently, not documented, and neither Mr. Jarosz nor Dr. Wolf have much, if any, actual recollection of what was discussed. Thus, without knowing the actual "facts and data" provided by Dr. Wolf, the question posed by sentence [2] of Rule 703, namely whether those "facts and data" were such that "experts in the particular field would reasonably rely on those

kinds of facts or data in forming an opinion on the subject" seems now difficult, and perhaps impossible, to truly and objectively evaluate.

Also, that impacts Rule 705, FEDERAL RULES OF EVIDENCE, providing:

> Unless the court orders otherwise, an expert may state an opinion — and give the reasons for it — without first testifying to the underlying facts or data. But the expert may be required to disclose those facts or data on cross-examination. (emphasis added)

The Committee Notes explain that "[t]his rule, which relates to the manner of presenting testimony at trial, is revised to avoid an arguable conflict with revised Rules 26(a)(2)(B) and 26(e)(1) of the Federal Rules of Civil Procedure or with revised Rule 16 of the Federal Rules of Criminal Procedure, which require disclosure in advance of trial of the basis and reasons for an expert's opinions." Notes of Advisory Committee on Rules – 1993 Amendment.

The Committee Notes also explain that "[i]f a serious question is raised under Rule 702 or 703 as to the admissibility of expert testimony, disclosure of the underlying facts or data on which opinions are based may, of course, be needed by the court before deciding whether, and to what extent, the person should be allowed to testify. This rule does not preclude such an inquiry." *Id.*

But, again, under the circumstances, the "underlying facts or data" of "the Conversation" are not known, and, apparently, unknowable.

The "gatekeeping" function of the district court is to ensure that a jury hears reliable expert testimony. Mr. Jarosz's testimony regarding the three subject topics may plainly rest on information provided by another expert, in this case Dr. Wolf, regardless whether Dr. Wolf's opinions/information are "admissible" *per se*. But, that is subject to the caveat that Dr. Wolf's information expressed during "the Conversation" meets the requirement that "experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject." And the subsequent requirement in Rule 705 that the expert, Mr. Jarosz, "may be required to disclose those facts or data on cross-examination." But, of course, here, neither Mr. Jarosz nor Dr. Wolf apparently have the ability to actually "disclose those facts or data on cross-examination."

Clearly, under the rationale of *Apple*, "[c]onsistent with Rule 703, patent damages experts often rely on technical expertise outside of their field when evaluating design around options or valuing the importance of the specific, infringing features in a complex device." 757 F.3d at 1321 (emphasis added).

Thus, the Federal Circuit has acknowledged that a damages expert may rely, per Rule 703, on a technical expert's "valuation" of "the importance of the specific, infringing features in a complex device."

But, a technical expert who may have expertise in "evaluating design around options," as in *Apple*, or in evaluating infringement, validity, *etc.*, does not necessarily have the requisite qualifications under Rule 702 and *Daubert* to voice opinions on "valuation" of "the importance of the specific, infringing features in a complex device." He/she might – but might not.

Namely, saying that damages experts in patent cases often rely on testimony by a party's technical expert(s), while true, does not address the question under Rule 703 whether an expert in the field of assessing damages in a patent infringement case, here Mr. Jarosz, would "reasonably rely on those kinds of facts or data," namely "facts or data" related to the "valuation" of "the importance of the specific, infringing features in a complex device."

In other words, saying simply that a damages expert relied on a "technical expert" under Rule 703 to support various portions of his/her report is not a talisman ensuring admissibility of the damages expert's opinion(s) under Rule 702 and *Daubert*.

Specifically, if a "damages expert" is relying on a "conversation" or other disclosure from a "technical expert," Rules 702, 703, and *Daubert* require, as part of the trial court's "gatekeeping function" to determine whether the "technical expert" was providing the "damages expert" with, in this case, "valuation" "facts and data" within the scope of the "technical expert's" qualifications per Rule 702.

Otherwise, potentially unreliable expert testimony – namely, testimony by a "technical expert" outside the scope of his/her qualifications, as well as outside the scope of the other factors under Rule 702 ("based on sufficient facts or data," "product of reliable principles and methods," "reliably applied the principles and methods to the facts of the case") – could be "indirectly" injected into a case – improperly so – through a damages expert's testimony.

Nevertheless, once again, ZLC's current motion relates to potential testimony by Dr. Wolf, not Mr. Jarosz. However, the foregoing suggests that the more relevant question is whether Mr. Jarosz should be permitted to testify on the three topics mentioned in ZLC's motion, to the extent that Mr. Jarosz relies solely on "the Conversation" for his testimony.

3. Potential Testimony and Rule 26

Additionally, once again, ZLC does not seek to exclude Dr. Wolf's testimony to the extent encompassed by his expert reports. And ZLC's current motion does not seek to limit Mr. Jarosz's testimony.

However, ZLC's motion also necessarily raises the question whether a footnote citation to "Conversation with [technical expert]" is alone sufficient to satisfy Rules 26(a)(2)(B), and 37(c)(1), FEDERAL RULES OF CIVIL PROCEDURE, where such "conversation" has not been documented, neither party to that conversation can recall the "details" of that conversation, and, as a result, effective cross-examination on the substance of such "conversation" is effectively foreclosed.

Under Rule 26(a)(2)(B), an expert report must contain, *inter alia*, "(i) a complete statement of all opinions the witness will express and the basis and reasons for them" and "(ii) the facts or data considered by the witness in forming them." The Notes of the Advisory Committee – 1993 Amendment explain that "[p]aragraph (2). This paragraph imposes an additional duty to disclose information regarding expert testimony sufficiently in advance of trial that opposing parties have a reasonable opportunity to prepare for effective cross examination and perhaps arrange for expert testimony from other witnesses." Those Notes further explain that "[p]aragraph (2)(B) requires that persons retained or specially employed to provide expert testimony, or whose duties as an employee of the party regularly involve the giving of expert testimony, must prepare a detailed and complete written report, stating the testimony the witness is expected to present during direct examination, together with the reasons therefor." (emphasis added) Those Notes additionally explain that "[r]evised Rule 37(c)(1) provides an incentive for full disclosure; namely, that a party will not ordinarily be permitted to use on direct examination any expert testimony not so disclosed." Rule 37(c)(1) provides, in part, that "*Failure to Disclose or Supplement*. If a party fails to provide information or identify a witness as required by Rule 26(a) or (e), the party is not allowed to use that information or witness to supply evidence on a motion, at a hearing, or at a trial, unless the failure was substantially justified or is harmless. In addition to or instead of this sanction, the court, on motion and after giving an opportunity to be heard: * * *."

Thus, plainly Rules 26(a)(2)(B), and 37(c)(1) were intended to require an expert report "stat[e] the testimony the witness is expected to present during direct examination," and well as "the reasons therefor."

Although Mr. Jarosz's damages report is discussed in more detail below, the question, once again, is whether a footnote citation to "Conversation with [technical expert]" alone is sufficient to satisfy Rules 26(a)(2)(B), and 37(c)(1). Especially where, as here, in the body of Mr. Jarosz's report he says:

> In undertaking my study, I have considered information from a variety of sources, each of which is a type that is reasonably relied upon by experts in my field. Those sources are identified in Tab 2. In addition, I and/or people working under my direction have had access to produced documents and have had discussions with Dr. Patrick Wolf, Philip's technical expert. I also have relied upon my professional judgment and expertise, gathered in many years of estimating damages and valuing technology in IP contexts.

Jarosz Report at 3. Namely, Tab 2 is entitled "Documents Reviewed And/Or Relied Upon," and consists of a 21 page, single spaced document, listing (1) documents by "Bates Ranges," without further identification, (12 of the 21 pages), (2) depositions, and exhibits, (3) "Legal Documents," such as the complaint, interrogatories *etc.,* (4) trial transcripts, (5) expert reports, (6) "Cases," (7) "News Articles, Press Releases, and Books," (8) "Websites," (9) Patents, (10) "SEC Forms, and (11) "Other."

Again, the body of Mr. Jarosz's report says: "In addition, I and/or people working under my direction have had access to produced documents and have had discussions with Dr. Patrick Wolf, Philip's technical expert." That is, "[i]n addition" to the materials listed in Tab 2, there apparently are materials <u>not</u> listed in Tab 2, which the report says that Mr. Jarosz "and/or people working under my direction" had access to in preparing the Jarosz report, specifically (1) "produced documents," and (2) "discussions with Dr. Patrick Wolf."

With respect to the "discussions with Dr. Patrick Wolf," which, again, apparently was a single conversation between Mr. Jarosz and Dr. Wolf (as opposed to multiple conversations, or conversations between Dr. Wolf and "people working under my [Mr. Jarosz's] direction"), that is not listed on Tab 2 to the Jarosz report. Nor is there any "description" whatsoever of that "conversation" in the Jarosz report, other than in the context of Mr. Jarosz's "understanding" in the body of his report, accompanied by a footnote citation to "Conversation with Dr. Wolf."

Thus, to the extent that Dr. Wolf conveyed "facts or data" to Mr. Jarosz during "the Conversation," those "facts or data" are not identified in Mr. Jarosz's report – only Mr. Jarosz's "understanding" from "the Conversation."

Again, this question has not been briefed by the parties. But there is question whether a footnote citation in a patent infringement damages expert's report to a "Conversation with [a technical expert]" where the substance of that "conversation" was not documented and the "details" of which could not be recalled by either the "damages' expert" or the "technical expert, runs counter to the intent and purpose of Rules 26(a)(2)(B), and 37(c)(1).

However, as discussed below, despite the foregoing, there is only one relatively small portion of Mr. Jarosz's report where that is an issue.

4. Jarosz Report

Again, Mr. Jarosz's report has been sealed. Accordingly, references to his report will necessarily be general.

a) ZLC's Assertions

Again, although Mr. Jarosz refers to Dr. Wolf's expert report a number of times, it appears that ZLC's motion is limited to those instances where Mr. Jarosz has included a footnote cite "Conversation with Dr. Wolf." There are eight such instances, namely page 17 n. 91, page 42 n. 240, page 64 n. 315, page 64 n. 317, page 65 n. 318, page 69 n. 337, page 73 n. 358, page 92 n. 429.

But, of those eight instances where Mr. Jarosz cites "Conversation with Dr. Wolf" in a footnote, ZLC's motion relates on only three.

Namely, ZLC makes broad statements in its motion concerning potential testimony by Dr. Wolf concerning (1) the importance of the patented features to a wearable cardiac defibrillator ('WCD'), (2) the relative importance of the differences between ZOLL Lifecor's WCD 2000 and WCD 3000 products, and (3) whether the asserted claims of the patents-in-suit were the primary reason for the benefits associated with the biphasic waveform, size, and weight improvements of the WCD 3000 over the WCD 2000," ZLC Wolf Motion [Dkt. 454] at 1, in its memorandum in support of that motion, but ZLC lists only three conversations that Mr. Jarosz cites on pages 64, 64-65 and 73 of his report.

Namely, once again, ZLC lists (1) the "patents-at-issue are primarily responsible for the biphasic waveform benefits, and for the size and weight reduction benefits" of the accused device (namely, page 64 n. 317), (2) "almost every component related to the shock delivery (e.g., battery, insulation, circuitry) is likely smaller, lighter, and less costly to manufacture as a result of the patented

technology" (namely page 65 n. 318), and (3) "the patents-in-suit are the primary contributor of improvements in the WCD 3000 unit" (namely, page 73 n. 358). ZLC Wolf Memo [Dkt. 457] at 3-4.

b) Citations to "Conversation with Dr. Wolf"

(1) Pages 3-42 – Citations to "Conversation with Dr. Wolf" Not the Subject of ZLC's Motion

On page 3 of his report, under the heading "D. Evidence Considered," Mr. Jarosz refers generally to "discussions with Dr. Patrick Wolf, Philips' technical expert." Although he refers to "discussions" (plural), again, it appears that this was a single "discussion" or "conversation."

The first reference to "Conversation with Dr. Wolf" appears in footnote 91 on page 17of Mr. Jarosz's report, in connection with a statement explaining what the term "waveforms" refers to. ZLC does not cite that reference, and it does not appear that ZLC's motion relates to that statement.

The next reference to "Conversation with Dr. Wolf" appears in footnote 240 on page 42 of Mr. Jarosz's report, with an additional citation to Dr. Wolf's expert report, in connection with a statement regarding how changes in a waveform shape may affect the efficacy of defibrillation on a particular patient. Again, ZLC does not cite that statement, and it does not appear that ZLC's motion relates to that statement.

(2) Pages 64-65 - Citations to "Conversation with Dr. Wolf" That ZLC Relies On (and Does Not Rely On)

(a) Footnote 315, Page 64 – ZLC's Motion Does Not Extend to this Footnote

The next reference to "Conversation with Dr. Wolf" appears in footnote 315 on page 64 of Mr. Jarosz's report, again with an additional citation to Dr. Wolf's expert report. This appears in the section of Mr. Jarosz's report under the subheading "(2) Benefits Attributable to the Alleged Infringement" where Mr. Jarosz is comparing the "profitability" of the accused products versus the non-accused products, as discussed above.

Mr. Jarosz refers to a ZLC document listing three attribute/feature differences between the accused and non-accused products. Mr. Jarosz states his understanding that the patents-in-suit are "primarily responsible" for two of the three listed differences. Mr. Jarosz cites, in footnote 315, in support of that understanding, "Conversation with Dr. Wolf. Wolf Report at ¶¶ 42, 45, 46." The

referenced paragraphs in Dr. Wolf's Report are under the heading "VII. Overview of the Asserted Patents and discuss aspects of the inventions in the patents-in-suit that relate to two (of the three) listed attribute/feature differences. Dr. Wolf's report plainly communicates a relationship between the inventions of the patents-in-suit and two of the three listed differences, although Dr. Wolf did not use the phrase "primarily responsible."

It should be explained at this juncture that on page 64 of his report, Mr. Jarosz refers to "Conversation with Dr. Wolf" in two footnotes – namely, this footnote 315 (which also cites "Wolf Report at ¶¶ 42, 45, 46") and also in subsequent footnote 317, discussed below.

On page 64 of his report, Mr. Jarosz refers to two documents listing various differences between the prior non-accused product and the accused product.

The present discussion relates to the first of those two documents, which is a ZLC document entitled "* * *Evolution." That document, as noted above, lists three attribute/feature differences between the accused and non-accused products.

As noted above, Mr. Jarosz states his understanding that the patents-in-suit are "primarily responsible" for two of the three listed differences, and cites, in footnote 315, "Conversation with Dr. Wolf. Wolf Report at ¶¶ 42, 45, 46." But, ZLC does not move to exclude Dr. Wolf's testimony regarding that understanding. ZLC Wolf Memo [Dkt. 457] at 3. The portion of Mr. Jarosz's report that ZLC quotes on page 3 of its Memorandum in Support of its motion relates to text in Mr. Jarosz's report that cites to footnote 317 (addressed below), not current footnote 315.

(b) Footnote 317, Page 64 – Subject of ZLC's Motion

The next reference to "Conversation with Dr. Wolf" appears in footnote 317, also on page 64 of Mr. Jarosz's report.

As noted above, on page 64 of his report, Mr. Jarosz refers to two documents listing various differences between the prior non-accused product and the accused product.

At that point in his report, Mr. Jarosz is referring to the second of those two documents, namely a ZLC letter that, according to Mr. Jarosz, lists four "improvements" of the accused product over the prior non-accused product. Although the current ZLC letter in association with footnote 317 lists four differences or "improvements," while the above ZLC document entitled

"* * *Evolution" in association with footnote 315 lists three differences, the fourth "improvement," relating to "electrode system design" is not believed at issue in this suit.

Mr. Jarosz expresses his understanding that the patents-in-suit were "primarily responsible" for two of the four listed improvements in the ZLC letter, and cites "Conversation with Dr. Wolf" in connection with that understanding. The two (of the four) "improvements" that Mr. Jarosz refers to are also the two (of the three) listed attribute/feature differences above. Although Mr. Jarosz in footnote 317 did not also cite to the Wolf Report, the three paragraphs of the Wolf Report cited in footnote 315 above also provide support for Mr. Jarosz's statement here, but, again, Dr. Wolf did not use the phrase "primarily responsible" in his report.

Thus, although Mr. Jarosz did not, in footnote 317, include a parallel citation to "Wolf Report at ¶¶ 42, 45, 46" it would appear that Dr. Wolf's potential testimony based on those portions of his report, which ZLC expressly does not seek to exclude, would be applicable to Mr. Jarosz's understanding expressed in relation to both footnotes 315 and 317.

(c) Footnote 318, Page 65 – Subject of ZLC's Motion

The next reference to "Conversation with Dr. Wolf" appears in footnote 318, on page 65 of Mr. Jarosz's report. At this point in his report, the paragraph bridging pages 64 and 65, beginning with "Furthermore," Mr. Jarosz is expressing his understanding of certain attributes of components of the accused products, and that his understanding is that those attributes result from the patented technology. Mr. Jarosz cites "Conversation with Dr. Wolf" for that understanding. There is no parallel citation to portions of Dr. Wolf's report.

Also, Mr. Jarosz's statement in his report is phrased in terms of a probability, *i.e.*, "likely," and appears to contribute that probability to his conversation with Dr. Wolf. But, it appears that Dr. Wolf has not conducted any actual study of the components of the accused product to determine whether that statement is true or not. Accordingly, permitting Dr. Wolf to testify to what Mr. Jarosz says is his "understanding" would be potentially misleading for a jury.

(3) Page 69 – Citations to "Conversation with Dr. Wolf" – Not the Subject of ZLC's Motion

The next reference to "Conversation with Dr. Wolf" appears in footnote 337, on page 69 of Mr. Jarosz's report. In the body of the report, Mr. Jarosz is summarizing his view of a particular

waveform in terms of a technology advance. Mr. Jarosz first cites a publication as a support, and secondly cites "Conversation with Dr. Wolf." The cited publication has not been submitted by the parties, and thus whether that publication actually supports Mr. Jarosz's statement is not known.

(4) Page 73 – Citations to "Conversation with Dr. Wolf" – Subject of ZLC's Motion

The next reference to "Conversation with Dr. Wolf" appears in footnote 358, on page 73 of Mr. Jarosz's report. In the body of the report, Mr. Jarosz makes a first statement regarding a relationship between the "value" of the accused system and the patents-in-suit. There is no footnote cite for that statement, and the statement itself says "Based on the documents and testimony in this case." The conversation between Mr. Jarosz and Dr. Wolf is not part of the "documents and testimony in this case." Thus, it does not appear that ZLC's motion extends to that statement.

Mr. Jarosz makes a second statement asserting that the patents-in-suit are the "primary contributor" of improvements in the accused products. Mr. Jarosz, for that second statement, cites "Conversation with Dr. Wolf" in footnote 358. That is the statement referenced in ZLC's memorandum in support of its motion.

Although Mr. Jarosz cites only "Conversation with Dr. Wolf," the substance of his statement, with the exception of "primary contributor," appears to relate to the same subject matter above in relation to footnotes 315 and 317. As discussed above, footnote 315 includes a parallel citation to "Wolf Report at ¶¶ 42, 45, 46," and ZLC's motion expressly does not extend to Dr. Wolf's testimony based on his report.

(5) Page 69 – Citations to "Conversation with Dr. Wolf" – Not the Subject of ZLC's Motion

The next reference to "Conversation with Dr. Wolf" appears in footnote 429, on page 92 of Mr. Jarosz's report. In the body of the report at that juncture, Mr. Jarosz makes a statement regarding "design arounds," and cites "Conversation with Dr. Wolf" in footnote 429 as support. ZLC's motion does not list that topic among the topics ZLC seeks to exclude.

5. Summary

Accordingly, for the three topics that ZLC lists, ZLC Wolf Memo [Dkt. 457] at 3-4:

(1) the "patents-at-issue are primarily responsible for the biphasic waveform benefits, and for the size and weight reduction benefits" of the accused device (namely, page 64 n. 317) –

- Although footnote 317 does not include a parallel citation to portions of Dr. Wolf's report, footnote 315 does, and relates to the same subject matter. ZLC expressly does not seek to exclude Dr. Wolf's testimony based on his report. Thus, Dr. Wolf's testimony should not be precluded on this topic to the extent covered in his report.

(2) "almost every component related to the shock delivery (e.g., battery, insulation, circuitry) is likely smaller, lighter, and less costly to manufacture as a result of the patented technology" (namely page 65 n. 318) –

- Mr. Jarosz cites only "Conversation with Dr. Wolf," and Philips has not pointed to any particular portion or portions of Dr. Wolf's reports that directly addresses that statement.

- Also, Mr. Jarosz's statement in his report is phrased in terms of a probability, *i.e.*, it uses the word "likely," and appears to contribute that probability to his conversation with Dr. Wolf.

- But, it appears that Dr. Wolf has not conducted any actual study of the components of the accused product to determine whether that statement is true or not.

- Accordingly, permitting Dr. Wolf to testify to what Mr. Jarosz says is his "understanding" would be potentially misleading for a jury.

(3) "the patents-in-suit are the primary contributor of improvements in the WCD 3000 unit" (namely, page 73 n. 358)

- With the exception of "primary contributor," that appears to relate to the same subject matter above in relation to footnotes 315 and 317.

- Footnote 315 includes a parallel citation to "Wolf Report at ¶¶ 42, 45, 46," and ZLC's motion expressly does not extend to Dr. Wolf's testimony based on his report.

C. Recommendation

For the foregoing reasons, the master recommends that the Court GRANT-IN-PART and DENY-IN-PART ZLC's Motion to Exclude Testimony of Prof. Patrick Wolf [Dkt. 454] without prejudice to filing a subsequent motion *in limine*.

In particular, the master recommends that the Court DENY ZLC's motion to the extent that it seeks to exclude Dr. Wolf's testimony based on his reports.

From the foregoing, of the three listed statements in Mr. Jarosz's report that ZLC references in connection with this motion, two of the three, namely the statements in connection with footnote 317 on page 64 and in connection with footnote 358 on page 73, although not expressly citing portions of Dr. Wolf's reports, appear on their face to relate to the same subject matter as footnote 315 on page 64, which does include a parallel cite to Dr. Wolf's report. ZLC's motion does not extend to Mr. Jarosz's statement in conjunction with footnote 315. Accordingly, Dr. Wolf's testimony *vis-à-vis* Mr. Jarosz's statements in connection with footnotes 317 and 358 should not be precluded to the extent encompassed by Dr. Wolf's reports.

The master recommends that the Court GRANT ZLC's motion solely with respect to Mr. Jarosz's statement in the paragraph bridging pages 64 and 65, beginning with "Furthermore."

Mr. Jarosz cites only "Conversation with Dr. Wolf" in support, and Philips has not provided any express citation to any portion or portions of Dr. Wolf's reports that provide support for Mr. Jarosz's statement, or that would provide support for Dr. Wolf's testimony on the same. Additionally, without any actual study of the components of the accused product to determine whether that statement is true or not, the statement appears to lack the foundation required by *Daubert* and Rule 702, and accordingly Rules 703 and 705.

The master recommends that the Court DENY ZLC's motion in all other respects.

X.
Summary of Recommendations

In summary, for the foregoing reasons, the master recommends that:

- The Court DENY Philips' Motion to Exclude Testimony of Mark J. Chandler [Dkt. 462], without prejudice to later filing a motion *in limine*.

- The Court DENY Philips' Motion to Exclude Testimony of Dr. Sandor Kovacs [Dkt. 449], without prejudice to a later motion *in limine*.

- The Court DENY Philips' Motion to Exclude Testimony of Dr. Wayne McDaniel [Dkt. 459] with the caution that to the extent Drs. McDaniel and Berger offer the same opinions based on the same underlying evidence, the testimony of one of those experts would be excluded at trial as being "needless" "cumulative testimony" under Rule 403.

    - However, to the extent that Drs. McDaniel and Berger are relying on differing lines of evidence to reach their conclusions, such that their testimony is complementary rather than redundant, such testimony will be allowed.

    - The master further recommends that the Court direct ZLC to co-ordinate the testimony on direct examination to avoid unnecessary duplication and cumulative evidence, pursuant to Rule 403, FEDERAL RULES OF EVIDENCE.

- ZLC's Motion to Exclude Testimony of Dr. John P. Freese [Dkt. 452] presents two disputes regarding Dr. Freese's proposed testimony, namely disputes regarding Dr. Freese's proposed testimony regarding (1) "patient compliance" issues, and (2) the "clinical value of external defibrillators."

    - With regard to the "patient compliance issues," the master recommends that the Court DENY ZLC's motion without prejudice to seeking an order *in limine*.

        - In connection with any subsequent motion *in limine*, nothing said in this Report and Recommendation should be understood or interpreted as voicing any view whatsoever on (1) whether Dr. Freese may properly rely on the "WEARIT article" pursuant to Rule 26, given his failure to cite the article in the body of his report, (2) whether ZLC suffered any prejudice during his deposition as a result of failure to cite the article in the body of his report, (3) whether the "WEARIT article" may be properly considered under Rules 703 and 705, or (4) whether the "WEARIT article" provides actual support for Dr. Freese's broader assertions.

- With regard to the "clinical value of external defibrillators" issue, the master recommends that the Court DENY ZLC's motion, but direct Philips to limit Dr. Freese's direct testimony to the "opinions" on this topic within the "four corners" of paragraphs 30-35 of Dr. Freese's report based on Dr. Freese's "personal experience."

- ZLC's Motion to Exclude Testimony of Mr. John Jarosz [Dkt. 453] be GRANTED-IN-PART and DENIED-IN-PART.
  - To the extent that Mr. Jarosz's report and subsequent testimony is admitted, the master recommends that the discussion of an alleged reduction in the cost of producing the accused products be excluded. That alleged reduction in cost is not used in Mr. Jarosz's subsequent calculations, appears to have been included only to bolster the alleged "reasonableness" of his approach, and runs the risk of misleading a jury.
  - Also, the master recommends that the Court exclude Mr. Jarosz's report and proposed testimony regarding a 50% apportionment rate as expressed in footnote 359 of his report. The master does not recommend excluding any other portion of Mr. Jarosz's report or proposed testimony.
  - Except for the foregoing, the master recommends that the Court DENY ZLC's motion.

- The Court GRANT-IN-PART and DENY-IN-PART ZLC's Motion to Exclude Testimony of Prof. Patrick Wolf [Dkt. 454] without prejudice to filing a subsequent motion *in limine*.
  - The master recommends that the Court DENY ZLC's motion to the extent that it seeks to exclude Dr. Wolf's testimony based on his reports.
    - Of the three listed statements in Mr. Jarosz's report that ZLC references in connection with this motion, two of the three, namely the statements in connection with footnote 317 on page 64 and in connection with footnote 358 on page 73, although not expressly citing portions of Dr. Wolf's reports, appear on their face to relate to the

same subject matter as footnote 315 on page 64, which does include a parallel cite to Dr. Wolf's report. ZLC's motion does not extend to Mr. Jarosz's statement in conjunction with footnote 315. Accordingly, Dr. Wolf's testimony *vis-à-vis* Mr. Jarosz's statements in connection with footnotes 317 and 358 should not be precluded to the extent encompassed by Dr. Wolf's reports.

- The master recommends that the Court GRANT ZLC's motion solely with respect to Mr. Jarosz's statement in the paragraph bridging pages 64 and 65 of his report, beginning with "Furthermore."
  - Mr. Jarosz cites only "Conversation with Dr. Wolf" in support, and Philips has not provided any express citation to any portion or portions of Dr. Wolf's reports that provide support for Mr. Jarosz's statement, or that would provide support for Dr. Wolf's testimony on the same.
  - Additionally, without any actual study of the components of the accused product to determine whether that statement is true or not, the statement appears to lack the foundation required by *Daubert* and Rule 702, and accordingly Rules 703 and 705.
- The master recommends that the Court DENY ZLC's motion in all other respects.

XI.
Objections

The Court's Order Appointing Special Master for Discovery of June 6, 2014 [Dkt. 171] provides:

> Any party may file with the Court, within fourteen (14) days of the filing of the R&R, an objection to the R&R, setting forth the basis for such objection. Any party opposing such objection shall file a response thereto within fourteen (14) days of the filing of the objection. The failure to file a timely objection shall constitute a waiver of any objection.

The parties should take notice that Order shortens the time period set by Rule 53(f)(2), Federal Rules of Civil Procedure.

SIGNED this 12th day of May 2017, in San Antonio, Texas.

/s/ Gale R. Peterson

Gale R. Peterson, Special Master

CERTIFICATE OF SERVICE

A copy of the foregoing was electronically filed with the Court through the ECF system this 12th day of May 2017. Notice of this filing will be sent by operation of the Court's electronic filing system. Parties may access this filing through the Court's system.

/s/ Gale R. Peterson

Gale R. Peterson, Special Master